





### Missouri Department of Transportation and Highway Patrol Employees' Retirement System

## Comprehensive Annual Financial Report For The Fiscal Year Ended June 30, 2004

Norm Robinson Executive Director

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As of August 28, 2004, the Highway and Transportation Employees' and Highway Patrol Retirement System has been renamed the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS).

MPERS is a Pension Trust Fund of the State of Missouri

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# Introductory Section

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#### LETTER OF TRANSMITTAL

Norm Robinson Executive Director



Susie Dahl Assistant Executive Director

January 25, 2005

Board of Trustees MoDOT and Patrol Employees' Retirement System Jefferson City, MO 65102

Dear Board Members:

It is again with great pleasure that I submit this year's annual report of the MoDOT and Patrol Employees' Retirement System (MPERS).

#### REPORT CONTENTS AND STRUCTURE

This Comprehensive Annual Financial Report of MPERS for the fiscal year ended June 30, 2004 (FY04), has been prepared to enhance knowledge and understanding of the retirement system. The material has been prepared in a manner to be useful and informative to the members, to the management of the Missouri Department of Transportation and Missouri State Highway Patrol, and to the elected officials of the State of Missouri.

Management of the retirement system is responsible for the accuracy and completeness of the information in this report. To the best of our knowledge and belief, the information presented is accurate in all material respects and is reported in a manner designed to fairly present the financial position of the fund. The report is also designed to comply with the reporting requirements of Sections 104.480, 104.1006, and 105.661 of the Revised Statutes of Missouri (RSMo) as amended. The report is divided into the following five sections:

- · The Introductory Section, which contains general information regarding the operations of MPERS.
- The Financial Section, which contains an in-depth explanation of the financial position of the plan, as well as the auditor's opinion of the system's financial records.
- The Investment Section, which outlines the value of the system's assets and the historical returns of the portfolio.
- The Actuarial Section, which certifies the recommended contribution rates and presents the
  assumptions used to arrive at those rates.
- The Statistical Section, which provides a statistical profile of our active, terminated vested, and retired members.

#### FISCAL YEAR 2004 HIGHLIGHTS

The most significant challenge this fiscal year was the implementation of Senate Bill 248 that contained the retirement and health care incentive. As the bill progressed through the legislative process, staff was kept abreast of status and changes made to this legislation so we could keep our members better informed during the process. Individualized notification letters were sent to eligible members and additional information was presented during our pre-retirement planning seminars to accommodate increased interest.

A provision in the bill allowed a number of governing boards to elect to provide a medical incentive to employees. On July 3, 2003, the Highways and Transportation Commission as the governing board of the MoDOT and Patrol Medical Insurance Plan, made the decision not to opt into the medical incentive of the legislation.

However, the retirement incentive portion of the bill was in effect for active employees who would have first qualified for normal retirement between October 1, 2003 and January 1, 2004. There were 103 members who were eligible to participate and of that number, 21 actually retired with this retirement incentive. The prompt delivery of accurate information to eligible members was particularly critical at this time in order to allow members sufficient time to make decisions about participating in the incentive program. That is because participation required members to submit retirement applications by July 31, 2003 in order to be eligible to retire by the September 1, 2003 deadline.

In November 2003, the Board approved implementation of a fully insured disability program through The Standard Insurance Company (The Standard). Advantages of a fully insured program include a transfer of the funding liability and risk to the insurance company, claims determinations are made by those who specialize in that field, and claims determinations being made more promptly. The fully insured program was implemented July 1, 2004. Administrative services are also being provided by The Standard for disability applicants whose date of disability precedes July 1, 2004.

This year we also added a new seminar to better meet members' needs. The Benefit Basics seminar, is an easy name for our members to identify with and gives a clear picture of the content. During this fiscal year, the Benefit Basics seminar was presented to over 660 members for the first time.

#### BACKGROUND INFORMATION

MPERS was established by state statute in 1955. Under that legislation, employees of the Missouri Department of Transportation and Missouri State Highway Patrol became members of the retirement system on September 1, 1955. The system initially provided only regular retirement and disability benefits and required the employees to share in the cost of the plan.

While the participating employers in the system, the Missouri Department of Transportation and the Missouri State Highway Patrol, have remained the same since 1955, the plan provisions have changed many times. Today, at no cost to the employees, the system offers not only enhanced retirement and disability benefits, but also benefits for survivors of active and retired members, benefits for qualified terminated vested members, and death benefits.

#### FINANCIAL INFORMATION

#### Accounting System

This report has been prepared in accordance with generally accepted accounting principles for governmental accounting and reporting. Assets, liabilities, revenues, and expenses are reported on the accrual basis. Internal controls have been established by management to reasonably protect the assets from loss, theft, or misuse.

#### Additions

Two main sources of income are used to finance retirement, survivor, and disability benefits: employer contributions and income on investments. During FY04, additions totaled \$268,512,336. Employer contributions were \$86,724,914. Net investment income for the year was \$180,910,906. Other additions totaled \$876,516.

#### **Deductions**

Expenses of the system totaled \$156,626,160 in FY04. Benefit payments represent the major expense of the retirement system. Expenses incurred to administer the plan include personal services provided by the staff and professional services for investing the system's funds, monitoring the system's investment guidelines, providing actuarial information, and auditing. During Fiscal Year 2004, benefit payments totaled \$154,987,027. Administrative expenses during this period were \$1,639,133.

During FY04, contributions and investment income exceeded deductions by \$111,886,177. The Management's Discussion and Analysis begins on page 15 of the Financial Section and assesses the financial position of the system.

## Introductory Section

#### **INVESTMENTS**

The state statutes allow the system to make investments using the same care, skill, and diligence that a prudent person acting in a similar capacity would use. In keeping with this prudent person rule, the Board of Trustees has established investment policies. The system's investment managers are allowed full discretion in investment decisions within the confines of those guidelines and the statutory investment authority.

Our investment portfolio experienced a 15.24% time-weighted rate of return for FY04. Over the last five fiscal years through June 30, 2004, our balanced fund earned a time-weighted rate of 2.48%.

#### **FUNDING**

The Board of Trustees certifies to the Missouri Department of Transportation and the Missouri State Highway Patrol the actuarially determined percentages of payroll necessary to meet the system's obligations. Realizing the importance of maintaining a financially sound system, the participating employers have never failed to contribute the amounts certified by the Board of Trustees.

#### LEGISLATION ENACTED DURING THE 2004 LEGISLATIVE SESSION

One noteworthy change that occurred during the 2004 Legislative Session was HB 1440. Several years ago the Missouri Highway and Transportation Department changed its name to the Missouri Department of Transporation. We felt our name should be changed to be more in line with the name of the agencies we represent. HB 1440 changed the official name of the retirement system from Highway and Transportation Employees' and Highway Patrol Retirement System to the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS). We believe this name change will be easier for our members to remember when identifying their retirement system.

Other changes were minor modifications and clarifications to both the Closed Plan and the Year 2000 Plan to assist staff in managing the day-to-day business of the retirement system.

#### REPORT CONCLUSION & DISTRIBUTION

This report is a product of the combined efforts of the MPERS' staff and advisors functioning under your leadership. It is intended to provide complete and reliable information, which will facilitate the management decision process; serve as a means for determining compliance with legal requirements; and allow for the evaluation of responsible stewardship of the funds of the system.

Copies of this report are provided to the Governor, the State Auditor, and the Joint Committee on Public Employee Retirement. It is also being distributed to all Missouri Department of Transportation Division and District offices and Missouri State Highway Patrol General Headquarters and Troop offices. These offices form the link between MPERS and its members, and their cooperation contributes significantly to the success of MPERS. We hope all recipients of this report find it informative and useful. Copies to others will be furnished upon request.

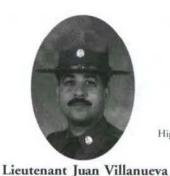
#### **ACKNOWLEDGMENTS**

The compilation of this comprehensive annual financial report reflects the combined effort of MPERS staff under the leadership of the Board of Trustees. I commend their efforts on creating another outstanding report. In addition, I take this opportunity to express my gratitude to the staff, advisors, and the many other people and organizations who have worked so diligently to assure the successful operation of the system.

Respectfully Submitted,
Robinson

Norm Robinson

Executive Director



Highway Patrol Employees' Representative Elected by Patrol Employees

Term Expires 7-1-2006

James B. Anderson Board Chairman Highways & Transportation Commissioner Term Expires 3-1-2009



Colonel Roger Stottlemyre Board Vice-Chairman & Superintendent of the Missouri State Highway Patrol

Ex-Officio Member



Senator Stephen Stoll
State Senator
District 22
Appointed by President Pro-Tem of the Senate

## Board of Trustees



Representative Larry Crawford
State Representative
District 117
Appointed by the Speaker of the House

Dave Snider
Interim Director of the Missouri
Department of Transportation
Ex-Officio Member

MPERS is governed by a Board of Trustees. As set out in Section 104.160 of the Revised Statutes of Missouri, the Board is comprised of ten members:



Commission Member Highways & Transportation Commissioner Term Expires 3-1-2007



Bill Shaw Retiree Representative Elected by Retired Members of MPERS Term expires 7-1-2006



Duane Michie Commission Member Highways & Transportation Commissioner Term Expires 3-1-2009

Harold Reeder
MoDOT Employees' Representative
Elected by MoDOT Employees
Term Expires 7-1-2006

#### CHAIRMAN'S LETTER

#### **Board of Trustees**



James B. Anderson, Chairman
Colonel Roger Stottlemyre, Vice Chairman
Duane Michie, Member
Bill McKenna, Member
Representative Larry Crawford, Member
Senator Stephen Stoll, Member

Dave Snider, Member Lieutenant Juan Villanueva, Member Harold Reeder, Member Bill Shaw, Member Norm Robinson, Executive Director Rich Tiemeyer, Counsel

October 1, 2004

To the Members of the MoDOT and Patrol Employees' Retirement System:

On behalf of the Board of Trustees, we are pleased to present the Comprehensive Annual Financial Report of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) for the fiscal year ended June 30, 2004. This report provides information on the financial status of your retirement system while also highlighting significant changes that occurred during the year.

The most significant change to the system during the 2004 Legislative Session was the name change of the system from Highway and Transportation Employees' and Highway Patrol Retirement System to MoDOT and Patrol Employees' Retirement System (MPERS). We firmly believe this name change will be easier for our members in identifying their retirement system.

During the past year, the Board's membership experienced some change due to the departure of Barry Orscheln and Henry Hungerbeeler, and the addition of Duane Michie and Dave Snider. Barry, having served 5 years & 10 months, and Henry having served 4 years & 6 months, exemplified what fiduciary responsibility means in their every action. Their concern for the membership served as a model for other board members, and we recognize them for the valuable contributions they made while serving as trustees. Although we will miss working with Barry and Henry, we welcome the opportunity to work with Duane and Dave.

In addition, we welcomed Larry Krummen as the system's first Chief Investment Officer to assist the Board in the management and oversight of system assets. Much of the year has been spent on restructuring and transitioning the investment portfolio to take advantage of current opportunities in the marketplace. We have made a lot of changes in a short period of time, and have been fortunate to see some short-term success. There are certainly more changes in store for the future, and I am confident the best is yet to come.

Our retirement system continues to grow in asset value and in the number of active members as well as benefit recipients. At the end of the fiscal year, our net asset value was \$1,353,436,505 with 9,002 active members and 6,731 benefit recipients.

You are encouraged to carefully review this report, as it contains a wealth of information about your retirement system. If you have questions or comments, please feel free to contact us. We can be reached at P. O. Box 1930, Jefferson City, Missouri 65102. Our telephone number is 573-751-4640 (or toll-free 1-800-270-1271).

I am proud of MPERS and would like to take this opportunity to thank the members, retirees, advisors, and staff who assist the board in the operation of our retirement system. On behalf of the Board of Trustees, we will continue to prudently manage the system so as to provide for a secure retirement future for each of our members.

In closing, it is our hope that this letter provides you with a brief perspective on MPERS accomplishments and their commitment to continually improve our administrative operations.

Sincerely,

James B. Anderson

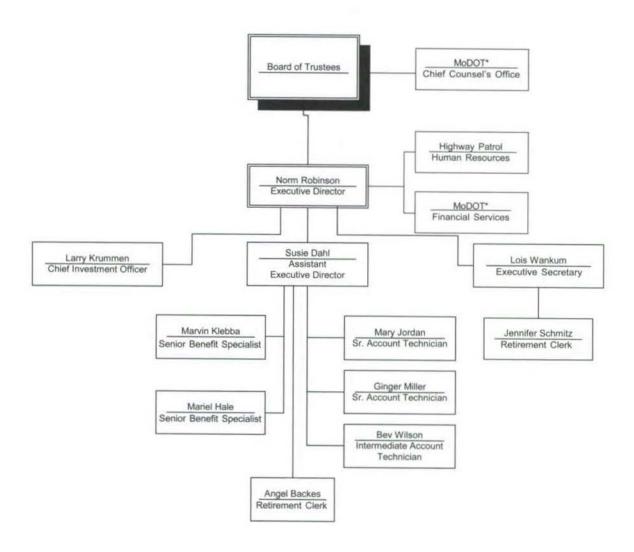
Chairman

#### ADMINISTRATIVE ORGANIZATION

The Executive Director of MPERS has charge of the offices and records of the system and hires such employees deemed necessary, subject to the direction of the Board of Trustees. The system employs eleven full-time staff.

The Chief Counsel of the Highways and Transportation Commission furnishes legal services and provides legal opinions of the retirement statutes as necessary for implementation.

Work assignments related to the Retirement System that are performed by Missouri Department of Transportation and Missouri State Highway Patrol personnel are considered duties in connection with their regular employment.



<sup>\*</sup> The Retirement System reimburses the department for time spent by these individuals in performing retirement related duties.

#### RETIREMENT SYSTEM

#### DIRECTOR'S OFFICE

The goal of MPERS is to provide quality customer service to its members. The interests of the taxpayers of the State of Missouri are safeguarded by the staff's ongoing review of retirement policies, procedures, investments, and legislation--all in an effort to improve the day-to-day business of the system.



Norm Robinson Executive Director



Susie Dahl
Assistant Executive Director



Larry Krummen Chief Investment Officer



Lois Wankum Executive Secretary



Jennifer Schmitz Retirement Clerk

#### RETIREMENT SYSTEM (CONTINUED)

#### BENEFIT SERVICES

This section is responsible for all contact with the membership regarding the benefit programs administered by MPERS, which include retirement, member education and disability benefits. They are also responsible for establishing and maintaining all computerized membership records and obtaining and calculating prior state service credit. Duties also include balancing payroll deductions and entering the payroll, service, and leave data into the system's computerized database.



Marvin Klebba Senior Benefit Specialist



Mariel Hale Senior Benefit Specialist



Angel Backes Retirement Clerk



Mary Jordan Senior Account Technician



Ginger Miller Senior Account Technician



Bev Wilson Intermediate Account Technician

#### PROFESSIONAL SERVICES

The following firms are retained by the Board of Trustees to serve in professional capacities or provide consultant services. Please refer to pages 48 and 51 in the Investment Section for the Schedules of Expenses and Commissions for the Investment Managers.

#### Actuary

Gabriel, Roeder, Smith & Company Southfield, Michigan

#### Auditor

Evers & Company, CPA's Jefferson City, Missouri

#### **Business Consultant**

Maximus Waltham, Massachusetts

#### Risk Management\Insurance Consultant

The Standard Insurance Company Portland, Oregon

> Charlesworth Benefits Overland Park, Kansas

#### Investment Consultant

Summit Strategies Group St. Louis, Missouri

#### Legislative Consultant

Jack Pierce Jefferson City, Missouri

#### Master Trustee/Custodian

The Northern Trust Company Chicago, Illinois Acadian Asset Management Boston, Massachusetts

Artisan Partners Milwaukee, Wisconsin

Barclays Global Investors San Francisco, California

Enhanced Investment Technologies (INTECH) Palm Beach Gardens, Florida

> Julius Baer Investment Management New York, New York

> > Principal Global Investors Des Moines, Iowa

RMK Timberland Winston-Salem, North Carolina

Rockwood Capital Advisors St. Louis, Missouri

Rothschild Asset Management New York, New York

Silchester International Investors Limited New York, New York

> The Northern Trust Company Chicago, Illinois

UMB Investment Advisors Kansas City, Missouri

## Financial Section

#### In This Section

Independent Auditors' Report

Management's Discussion & Analysis

Statement of Plan Net Assets

Statement of Changes in Plan Net Assets

Notes to Financial Statements

Schedule of Funding Progress

Schedule of Employer Contributions & Development of Net Pension Obligations

Schedule of Administrative Expenses

Schedule of Investment Expenses



#### INDEPENDENT AUDITORS' REPORT



### Evers & Company, CPA's, L.L.C.

Certified Public Accountants and Consultants

To the Board of Trustees of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System Jefferson City, Missouri:

Elmer L. Evers Jerome L. Kauffman Richard E. Elliott Dale A. Siebeneck Keith L. Taylor Lynn J. Graves Jolynn Moore

We have audited the accompanying statements of plan net assets of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the Retirement System), a pension trust fund of the State of Missouri, as of June 30, 2004 and 2003, and the related statements of changes in plan net assets for the years then ended. These financial statements are the responsibility of the Retirement System's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net assets of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System as of June 30, 2004 and 2003, and the changes in plan net assets for the years then ended in conformity with accounting principles generally accepted in the United States of America.

As described in Note 1(e), the System has early implemented the additional footnote disclosures as required by the provisions of GASB Statement No. 40, Deposit and Investment Risk Disclosures, as of June 30, 2004.

The Management's Discussion and Analysis (MD&A) on pages 15 through 19 is not a required part of the basic financial statements but is supplemental information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplemental information. However, we did not audit the information and express no opinion on it.

Our audit was made for the purpose of forming an opinion on the financial statements taken as a whole. The supplementary schedules of funding progress and employer contributions on pages 36 and 37 are not a required part of the basic financial statements of the System, but are required by the Governmental Accounting Standards Board (GASB). The supplementary information included on pages 38 and 39 is presented for purposes of additional analysis and is not a required part of the basic financial statements of the Retirement System. Such information, included on pages 36 through 39, have been subjected to the auditing procedures applied in the audit of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

EVERS & COMPANY, CPA's, L.L.C.

Crure & Company, CPA's, LLC

Jefferson City, Missouri

October 26, 2004



For the Years Ended June 30, 2004 and 2003

The management of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) provides this discussion and analysis of the Retirement System's financial performance during Fiscal Year 2004 (FY04). Readers should consider this information in conjunction with the information that is furnished in the financial statements.

#### BASIC FINANCIAL STATEMENTS DESCRIPTIONS

As required by the GASB accounting standards, this report consists of management's discussion and analysis (this section), the basic financial statements, and notes to the financial statements.

Financial Statements report information about the System using accounting methods similar to those used by private-sector companies, by using the economic resources measurement focus and accrual basis of accounting. These statements provide both long-term and short-term information about the System's overall financial status. These statements follow this Management's Discussion and Analysis section:

- The <u>Statement of Plan Net Assets</u> includes all the System's assets and liabilities.
- The <u>Statement of Changes in Plan Net Assets</u> accounts for all the current year's additions (income) and deductions (expenses), regardless of when cash is received or paid.

Notes to the Financial Statements are included following the Financial Statements that interpret and explain some of the information in the Financial Statements and provide more detailed data. Required Supplementary Information follows the Notes and further support the information in the Financial Statements.

The following section of this Management's Discussion and Analysis is summarized data from the Financial Statements. The section entitled "Assessment of Overall Financial Position and Results of Operations" provides explanation and analyses of the major changes in the condensed Financial Statements.



For the Years Ended June 30, 2004 and 2003

#### CONDENSED FINANCIAL STATEMENTS

#### PLAN NET ASSETS

The System's combined net assets were \$1.353 billion at the end of FY04, an increase of \$112 million over the beginning balance of \$1.241 billion.

Plan investments represent the main component (88%) of total assets. These include holdings of stock, government sponsored enterprises, bonds, mortgages, real estate and timber.

The largest component of liabilities is Securities Lending Collateral (96%). This represents the amount owed for collateral return as the result of securities lent, which is a direct offset to the corresponding asset.

Accounts Payable includes \$5 million in Investment Sales Payable at June 30, 2004. This liability is entirely dependent on the timing of investment managers' activities and compares to \$21 million in payables at the end of (Fiscal Year 2003) FY03, resulting in the large change reported below.

#### Summarized Statement of Changes in Plan Net Assets

(in thousands of dollars)

	June 30, 2004	June 30, 2003	Change
Cash and Other Assets	\$ 23,643	\$ 22,306	5.99%
Investments	1,335,423	1,240,181	7.68%
Securities Lending Collateral	150,085	166,756	-10.00%
Capital Assets	708	688	2.91%
Total Assets	\$ 1,509,859	\$ 1,429,931	5.59%
BackDROP Payments Payable	\$ 90	\$ 0	n/a
Securities Lending Collateral	150,085	166,756	-10.00%
Accounts Payable	6,229	21,625	-71.20%
Long-Term Lease Debt	18	0	n/a
Total Liabilities	\$ 156,422	\$ 188,381	-16.97%
Net Assets	1,353,437	1,241,550	9.01%
Total Net Assets	\$ 1,353,437	\$ 1,241,550	9.01%

For the Years Ended June 30, 2004 and 2003

#### CHANGES IN PLAN NET ASSETS

Net investment income and appreciation, a primary component of plan additions, resulted in a gain of \$181 million. This is in contrast to the net gain of \$36 million in FY03. The following section further describes this situation and analyzes other changes between the fiscal years.

#### Summarized Statement of Changes in Plan Net Assets (in thousands of dollars)

	June	30, 2004	June	30, 2003	Change
Contributions	\$	87,568	\$	79,391	10.30%
Net investment income (loss) and investment appreciation					
(depreciation)		180,911		36,525	395.31%
Other income		34		0	n/a
Total additions	\$	268,513	\$	115,916	131.64%
Benefits		154,987		144,334	7.38%
Administrative expenses		1,639		1,452	12.88%
Total deductions	\$	156,626	\$	145,786	7.44%
Change in net assets	\$	111,887	\$	(29,870)	474.58%
Net assets-beginning		1,241,550	1	1,271,420	-2.35%
Net assets-ending	\$	1,353,437		1,241,550	9.01%



For the Years Ended June 30, 2004 and 2003

## ASSESSMENT OF OVERALL FINANCIAL POSITION AND RESULTS OF OPERATIONS

Overall, the financial position of the Retirement System improved by \$112 million, reported as the "change in net assets." The increase in investment income accounts for the largest portion of this improvement.

The main component of the increase in contributions to the System is in employer contributions. The contribution rate increased effective July 1, 2003. The rate applied to Missouri Department of Transportation (MoDOT) and non-uniformed Missouri State Highway Patrol (MSHP) payroll increased from 23.29% to 25.54% and the rate for uniformed MSHP payroll increased from 34.94% to 38.40%. This increase was to improve the funded ratio of the System and to offset prior years' negative investment returns. In addition, as part of the State's budget process, all employees whose annual income was less than \$40,000 were granted a \$600 annual raise.

Net Investment Income and Investment Appreciation (change in market value) improved from \$36 million in FY03 to \$181 million in FY04. Two significant items account for the majority of this change:

- FY03 was an abnormal year due to a major loss attributable to the sale of investments in the large cap index
  fund during the transition to Northern Trust, the System's new custodian. We transitioned from an
  individual account with United Missouri Bank to a commingled fund with Northern Trust. Most of the
  fund was moved in-kind; however, there were various sales and subsequent repurchases of securities that
  resulted in an accounting loss of approximately \$90 million when compared to the book value of the
  securities prior to liquidation.
- FY04 also saw a rebound in the performance of the equity markets. Given that several manager transitions
  occurred throughout the year, gains were realized as these assets were liquidated and transferred to the new
  equity managers.

Net Investment Appreciation accrues when investments are held over time. Due to the numerous manager transitions, several investment portfolios had been held only a few months prior to June 30, 2004. Specifically, the entire international equity account (approximately 20% of the portfolio) was transitioned in June of 2004, resulting in the cost and market amounts to be very comparable and, therefore, little or no appreciation or depreciation was evident. In addition, the new managers hired during the year are more actively trading the portfolio and will have fewer positions that have been held for long periods of time, resulting in smaller unrealized gains within the portfolio.

The main component of other income is rental of office space paid to the System by MoDOT.

Inclusion of the retirement contribution by the System for future benefits of System employees accounted for the majority of the increase in administrative expenses.

For the Years Ended June 30, 2004 and 2003

#### CAPITAL ASSETS

At the end of FY04, the System had invested \$708 thousand in fixed assets, net of depreciation.

#### Capital Assets Summary (in thousands)

	6/30/03 Balance	Additions	Deletions/ Retirements	6/30/04 Balance
Land and Improvements	84	0	0	84
Buildings	562	20	0	582
Office Equipment	81	32	3	110
Depreciation (Less)	(39)	(31)	(2)	(68)
Total	688	21	1	708

#### **DEBT ADMINISTRATION**

At June 30, 2004, the System had \$18 thousand outstanding long-term debt, consisting of payments due on a lease of a copier/printer. The cost of the copier was \$22 thousand and is included in office equipment in the Capital Assets Summary above.

### FUTURE CONDITIONS AFFECTING FINANCIAL POSITION OR RESULTS OF OPERATIONS

- The Board approved an increase in the required state contribution, effective July 1, 2004. The rate
  applied to MoDOT and non-uniformed Patrol payroll will increase from 25.54% to 28.28% and the
  rate for uniformed Patrol payroll will increase from 38.40% to 43.54%. This increase will improve the
  funded ratio of the System.
- The legislature approved, and the governor signed into law, an annual pay increase of \$1,200 for all state employees effective July 1, 2004.

#### CONTACTING THE RETIREMENT SYSTEM'S MANAGEMENT

This financial report is designed to provide a general overview of the Retirement System's finances. Questions about this report or requests for additional financial information should be sent to the Missouri Department of Transportation and Highway Patrol Employees' Retirement System, P.O. Box 1930, Jefferson City, MO 65102-1930.

It should be noted that the name of the System was changed in state statute. Effective August 28, 2004, the System's official name is the Missouri Department of Transportation and Highway Patrol Employees' Retirement System.



#### STATEMENT OF PLAN NET ASSETS

#### For the Years Ended June 30, 2004 & 2003

	200	4 2003
ASSETS:		
Cash	\$ 624,31	1 \$ 555,862
Receivables		
Contributions	3,694,50	8 3,559,835
Accrued interest and dividends	4,328,99	4 4,984,622
Investment sales	14,794,01	7 13,203,330
Other	44,49	-
Total Receivables	22,862,01	2 21,747,787
Investments, at fair value (Note 2)		
Common & preferred stocks	822,278,90	3 754,924,907
Government and government agency securities	311,452,56	330,947,116
Corporate bonds	69,604,05	86,737,524
Timberland	41,063,67	1 39,931,598
Real estate	51,375,54	2 -
Short term investments	39,648,32	27,640,199
Total Investments	1,335,423,05	9 1,240,181,344
Prepaid expenses	156,72	2,053
Invested securities lending collateral	150,084,86	166,755,616
Capital Assets		
Land	84,00	00 84,000
Building	581,61	561,703
Equipment	110,11	1 81,630
Accumulated depreciation	(67,52	6) (39,237)
Net Capital Assets	708,20	688,096
TOTAL ASSETS	1,509,859,10	1,429,930,758
LIABILITIES:		
Capital lease	17,89	
Accounts payable	1,237,93	775,938
Accrued BackDROP payments payable	89,73	30 -
Securities lending collateral	150,084,80	166,755,616
Investment purchases	4,992,23	36 20,848,876
TOTAL LIABILITIES	156,422,60	188,380,430
NET ASSETS HELD IN TRUST		
FOR PENSION BENEFITS	\$1,353,436,50	\$1,241,550,328

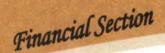
 $(A\ schedule\ of\ funding\ progress\ is\ presented\ in\ the\ Supplemental\ Information.)$   $See\ accompanying\ notes\ to\ financial\ statements.$ 

## STATEMENT OF CHANGES IN PLAN NET ASSETS

For the Years Ended June 30, 2004 & 2003

		2004	2003
ADDITIONS:			
Contributions-employer	\$	86,724,914	\$ 76,806,313
Contributions- other	-	842,665	 2,584,257
Total Contributions		87,567,579	79,390,570
Investment Income			
Net appreciation (depreciation)	1.		
(gains/losses andchanges in market value)		156,458,003	4,530,384
Interest and dividends	192	27,980,784	34,878,014
Security lending gross income		476,154	129,258
Class action receipts		5,827	
Broker commission recapture		98,557	-
Total Investment Income		185,019,324	39,537,656
Less: Investment Expenses	_	4,108,418	3,011,653
Net Investment Income (Loss)		180,910,906	36,526,003
Other Income		33,851	-
Total Additions		268,512,336	115,916,573
DEDUCTIONS:			
Monthly benefits		154,987,027	144,334,345
Administrative expenses		1,639,133	1,451,855
Total Deductions	27	156,626,160	145,786,200
NET INCREASE (DECREASE)		111,886,177	(29,869,627)
NET ASSETS HELD IN TRUST			
FOR PENSION BENEFITS			
Beginning of Year		1,241,550,328	1,271,419,955
End of Year	_\$	1,353,436,505	\$ 1,241,550,328

See accompanying notes to financial statements.



#### For the Years Ended June 30, 2004 & 2003

#### 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

As established under Section 104.020, the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the System) is a body corporate and an instrumentality of the State of Missouri. Due to the nature of the System's reliance on funding from the Missouri Department of Transportation and the Missouri State Highway Patrol, and control of the overall plan document by the legislative and executive branches of state government, the System is considered a part of the State of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

#### Basis of Accounting

The financial statements were prepared using the accrual basis of accounting. Contributions are recognized as revenues in the period in which employee services are performed. Expenses are recorded when the corresponding obligations are incurred. Dividend income is recognized when dividends are declared. Interest income is recognized when earned.

#### Method Used to Value Investments

Investments are reported at fair value on a trade date basis. Bonds and stocks traded on a national or international exchange are valued at the reported sales price at current exchange rates. Mortgages are valued on the basis of future principal and interest payments, and are discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals. Investments that do not have an established market are reported at estimated fair value. As of the fiscal year ends, estimates were limited to certain depository receipts within the fixed income portfolios, whereby the custodian estimates the market value based on a pricing matrix.

#### Capital Assets

The System capitalizes assets with an expected useful life greater than one year with a cost of greater than \$1,000. Capital assets are depreciated on the straight-line method over the estimated useful lives of the related assets. The estimated useful lives are as follows:

Furniture and Equipment Building and Improvements 5 – 10 years 30 years

#### Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

For the Years Ended June 30, 2004 & 2003

#### Implementation of Accounting Standard

The State of Missouri opted to early adopt the provisions of Governmental Accounting Standards Board (GASB) Statement 40, Deposit and Investment Risk Disclosures. This statement establishes and modifies disclosure requirements related investment risks. As an instrumentality of the state, the System is also implementing GASB 40 effective June 30, 2004.

#### Cash

Cash includes cash on hand, demand deposits, and short-term investments with original maturities of three months or less from the date of acquisition.

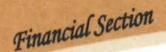
#### 2. PLAN DESCRIPTION:

The Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the System) is a single-employer, public employee retirement system with two primary benefit structures known as the Closed Plan and the Year 2000 Plan. The plans, which provide retirement, survivor, and disability benefits for employees of the Missouri Department of Transportation, the Missouri State Highway Patrol, the Missouri Highways and Transportation Commission, and the retirement system staff, are administered in accordance with the Revised Statutes of Missouri. As established under Section 104.020, the System is a body corporate and an instrumentality of the state. In the System are vested the powers and duties specified in sections 104.010 to 104.312 and 104.601 to 104.805 and 104.1003 to 104.1093, RSMo., and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes outlined pursuant to these sections. Responsibility for the operation and administration of the system is vested in the Board of Trustees. The System is not subject to the provisions of the Employee Retirement Income Security Act of 1974.

Generally, all covered employees hired before July 1, 2000 who were not covered under another state-sponsored retirement plan are eligible for membership in the Closed Plan. All covered employees hired on or after July 1, 2000 are eligible for membership in the Year 2000 Plan.

Membership in the Closed and Year 2000 Plans consisted of the following:

	FY2004		FY2004	FY2003
	Closed	Year 2000	Combined	Combined
Retirees, beneficiaries, and disabilities currently receiving benefits	5,237	1,494	6,731	6,556
Terminated employees entitled to but not yet receiving benefits	1,285	0	1,285	1,207
Active employees				
Vested	6,218	0	6,218	6,160
Non-Vested	512	2,272	2,784	2,735
Total Membership	13,252	3,766	17,018	16,658



#### For the Years Ended June 30, 2004 & 2003

#### Closed Plan Description

Employees covered by the plan are fully vested for benefits upon receiving five years of creditable service. Under the Closed Plan, MoDOT and civilian employees may retire with full benefits upon the earliest of attaining:

- Age 65 and active with 4 years of service;
- Age 65 with 5 years of service;
- Age 60 with 15 years of service; or
- Age 48 with age and service equaling 80 or more (Rule of 80).

For uniformed Patrol members the following provisions apply:

- Age 55 and active with 4 or more years of service;
- Age 55 and terminated-vested with 5 years of service;
- Age 48 with age and service equaling 80 or more (Rule of 80); or
- Mandatory retirement at age 60.

All non-uniformed members may retire early with reduced benefits at age 55 with at least 10 years of service.

The base benefit in the Closed Plan is equal to 1.6% multiplied by the final average pay multiplied by years of creditable service. For members of the uniformed patrol, the base benefit is calculated by applying the same formula and then multiplying the product by 1.333.

Retired uniformed members will receive an additional benefit of \$90 per month (plus COLAs) until attainment of age 65. This payment; however, is reduced by any amount earned during gainful employment. This benefit is not available to uniformed members hired after January 1, 1995.

For members employed prior to August 28, 1997, cost-of-living adjustments (COLAs) are provided annually based on 80% of the change in the consumer price index for all urban consumers for the United States (CPI-U) with a minimum rate of 4%, and a maximum rate of 5%, until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter the 4% minimum rate is eliminated and the annual COLAs rate will be equal to 80% of the increase in the CPI-U with an annual maximum of 5%. For members employed on or after August 28, 1997, COLAs are provided annually based on 80% of the increase in the CPI-U up to a maximum rate of 5%.

The life income annuity payment option (with no provision for survivorship) and the life income with 60 or 120 months guaranteed payment options are available to all members. Joint and 50% or 100% survivor options are available if married at the time of retirement. The reduction for the joint & 100% survivor option is based on the difference between the age of the member and the survivor. In the Closed Plan, there is no reduction for the joint and 50% survivor option.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.



#### For the Years Ended June 30, 2004 & 2003

Members may name a new spouse if:

- They were single at retirement and since married.
- They elected a spouse option at the time of retirement and the spouse preceded the member in death and then a remarriage occurred.

The member has one year from the date of marriage to reelect and name a new spouse.

All members who retire from active employment or began receiving normal or work-related disability benefits on or after September 28, 1985, are provided a \$5,000 death benefit payable to designated beneficiaries.

The BackDROP is a payment option that is available to eligible members upon retirement. This option provides for a monthly benefit to be calculated as if the member elected to retire at a previous date. If the BackDROP is elected, the monthly benefit payable on the actual retirement date is based on the benefit that would have been received by the member had he/she left employment and retired on the BackDROP date. In addition, the member will receive a lump sum payment equal to 90% of the life income annuity amount the member would have received during the BackDROP period. This lump sum amount includes any temporary benefits, COLAs and other benefit increases; also, credit will be received for the unused sick leave balance as of the date of retirement.

#### Year 2000 Plan Description

Employees covered by the plan are fully vested for benefits upon receiving five years of creditable service. Under the Year 2000 Plan, employees may retire with full benefits upon the earliest of attaining:

- Age 62 and with 5 years of service.
- Age 48 with age and service equaling 80 or more (Rule of 80).

Mandatory retirement for uniformed members is age 60 with 5 or more years service.

All members may retire early with reduced benefits at age 57 with at least 5 years of service. The base benefit in the Year 2000 Plan is equal to 1.7% multiplied by the final average pay multiplied by years of creditable service. For those retiring under the Rule of 80, an additional temporary benefit equivalent to 0.8% multiplied by final average pay multiplied by years of creditable service is payable until age 62.

COLAs are provided annually based on 80% of the change in the CPI-U up to a maximum rate of 5%.

The life income annuity payment option (with no provision for survivorship) and the life income with 120 or 180 months guaranteed payment options are available to all members. Joint and 50% or 100% survivor options are available if married at the time of retirement. The reduction for the joint & 50% or 100% survivor options are based on the member's age at retirement, as well as the age difference between the age of the member and the survivor.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.



#### For the Years Ended June 30, 2004 & 2003

Members may name a new spouse if:

- They were single at retirement and since married;
- They elected a spouse option at the time of retirement and the spouse preceded the member in death and then a remarriage occurred.

The member has one year from the date of marriage to reelect and name a new spouse.

All members who retire from active employment or began receiving work-related disability benefits on or after July 1, 2000, are provided a \$5000 death benefit payable to designated beneficiaries.

The BackDROP is a payment option that may be available to members upon retirement. This option provides for a monthly benefit to be calculated as if the member elected to retire at a previous date. If the BackDROP is elected, the monthly benefit payable on the actual retirement date is based on the benefit that would have been received by the member had he/she left employment and retired on the BackDROP date. In addition, the member will receive a lump sum payment equal to 90% of the life income annuity amount the member would have received during the BackDROP period. This lump sum amount includes any temporary benefits, COLAs and other benefit increases; also, credit will be received for the unused sick leave balance as of the date of retirement.

#### 3. DEPOSITS AND INVESTMENTS:

Funds are invested by investment managers under policies and procedures established by the Board of Trustees. Section 104.150, RSMo., provides the authority for the Board to invest System funds.

The System's many investments include terms related to interest rate changes. These options are incorporated into individual manager strategies. The investments include benchmark indices, reset dates, and embedded options such as calls, puts, and mortgage prepayments.

#### 3a - Deposit and Investment Policies

#### Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. It is the policy of the System to limit each equity manager to investing a maximum of 5% of the market value of their portfolio in any single company. Fixed income managers are limited to investing 3% of their portfolio into obligations of a single corporation. Obligations of the U.S. Government or U.S. Government agencies may be held in any amounts.

#### Investment Custodial Credit Risk

Custodial credit risk is an investment risk in that, in the event of the failure of the counterparty to a transaction, the System will not be able to recover the value of its investment or the collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the System, and are held by either: a) the

#### For the Years Ended June 30, 2004 & 2003

counterparty or b) the counterparty's trust department or agent but not in the System's name. It is the policy of the System to require that all investments be clearly marked as to ownership and, to the extent possible, shall be registered in the name of the System.

#### Cash Deposit Custodial Credit Risk

Cash deposit custodial credit risk is the risk that, in the event of the failure of depository financial institution, the System will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. Missouri state law requires that all public funds must be collateralized with acceptable securities having market values of at least 100% of the amount of funds on deposit (less any amount covered by FDIC insurance).

#### Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The System does not have a formal investment policy that limits investment maturities as a means of managing its exposure to interest rates. Interest rate risk is most prevalent within the fixed income allocation, where the Board of Trustees has set a target allocation as reflected in the System's investment policy.

#### Investment Credit Risk

Investment credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. It is the policy of the System to limit fixed income managers to purchasing securities that possess a minimum credit rating of "Baa" by Moody's and "BBB" by Standard & Poor's. Issues subsequently downgraded below these ratings must be sold as soon as is prudently possible unless their retention is approved by the Board of Trustees.

#### Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. The System is subjected to foreign currency risk through its exposure to fixed income and equity investments that are denominated in a foreign currency. While a certain amount of this exposure is desired for diversification purposes, the System's investment policy does allow its managers to utilize currency futures for defensive (hedging) purposes if deemed to be in the best interest of the System. The Board of Trustees has set a target allocation as reflected in the System's investment policy.

#### 3b - Cash Deposits

Cash balances include short-term securities held by the custodial bank to meet future System obligations and operating balances held by the depository bank. To maximize investment income, the float caused by outstanding checks is invested in overnight repurchase agreements, thus causing the negative book balances. The balances in these repurchase agreements for 2004 and 2003 were \$2,295,211 and \$3,021,853 respectively.

As of June 30, 2004 and 2003, the Retirement System had cash with a book balance of \$(1,670,900) and \$(2,465,991), respectively, and a bank balance of \$99 and \$5,871, respectively. The bank balances were covered by the FDIC.



#### For the Years Ended June 30, 2004 & 2003

#### 3c - Investments

		2004				200	3
		Carrying Amount	_	Market Value	Carrying Amount		Market Value
Government & government	2						
sponsored securities	\$	310,372,052	\$	311,452,567	\$ 318,200,734	\$	330,947,116
Corporate bonds		68,102,237		69,604,050	82,192,329		86,737,524
Common and preferred sto	cks	745,480,754		822,278,903	698,060,005		754,924,907
Real Estate		50,004,167		51,375,542	n/a		n/a
Timber		28,744,315		41,063,671	29,015,868		39,931,598
Short-term investments		39,648,325		39,648,325	27,640,199		27,640,199
Total Investments	\$	1,242,351,850	\$1	,335,423,058	\$ 1,155,109,135	\$	1,240,181,344

#### 3d - Investment Interest Rate Risk

	Market			Investment I	Mati	urities (in years)	
Investment Type	Value	Less than 1		1 - 5	87	6 - 10	More than 10
Corporate Bonds	\$ 69,604,051	\$ 6,621,910	\$	43,245,151	\$	19,736,990	\$ 0
Government Agencies	102,031,936	5,771,011		51,606,247		43,442,906	1,211,772
Government Bonds	62,212,664	7,285,583		47,712,968		7,214,113	0
Index Linked							
Government Bonds	13,648,367	0		0		13,648,367	0
Government Mortgage							
Backed Securities	132,885,426	0		2,065,669		57,424,205	73,395,552
Non-Government							
Backed CMOs	674,174	0	1 -	674,174	=	0	0
The second secon	\$381,056,618	\$19,678,504	\$	145,304,209	\$	141,466,581	\$74,607,324

For the Years Ended June 30, 2004 & 2003

#### 3e - Investment Ratings

Investment Type	S&P Rating	Market Value
Corporate Bonds	A-	\$ 3,954,535
Corporate Bonds	A	15,887,096
Corporate Bonds	A+	27,103,639
Corporate Bonds	AA-	1,493,868
Corporate Bonds	AA+	1,693,159
Corporate Bonds	AAA	8,941,088
Corporate Bonds	BBB-	1,201,267
Corporate Bonds	BBB	2,815,416
Corporate Bonds	BBB+	6,513,983
Government Agencies	AAA	102,031,936
Government Bonds	AAA	62,212,664
Index Linked Government Bonds	AAA	13,648,367
Government Mortgage Backed Sec	AAA	132,885,426
Non-Government Backed CMOs	NR	674,174
Total		\$ 381,056,618



For the Years Ended June 30, 2004 & 2003

#### 3f - Investment Foreign Currency Risk

Investment Type & Foreign Currency	Maturity Date		Fair Value
Cash and Cash Equivalents:			
Australian dollar	n/a	\$	210,674
British pound sterling	n/a		168,144
Euro	n/a		547,927
Japanese yen	n/a		125,362
Swedish krona	n/a		91,585
Swiss franc	n/a		52,238
Equities:			
Australian dollar	n/a		10,247,651
British pound sterling	n/a		43,046,493
Canadian dollar	n/a		10,024,860
Czech koruna	n/a		1,933,670
Danish krone	n/a		302,672
Euro	n/a		54,869,535
Hong Kong dollar	n/a		2,289,563
Indonesian rupiah	n/a		3,570,935
Japanese yen	n/a		48,090,415
Mexican peso	n/a		800,247
New Zealand dollar	n/a		615,173
Norwegian krone	n/a		5,085,377
Philippine peso	n/a		909,980
Singapore dollar	n/a		2,349,792
South African rand	n/a		6,854,688
Swedish krona	n/a		763,977
Swiss franc	n/a		10,639,740
		\$ 2	203,590,710

#### For the Years Ended June 30, 2004 & 2003

#### 3g - Securities Lending

Securities are loaned versus collateral that may include cash, U.S. government securities and irrevocable letters of credit. U.S. securities are loaned versus collateral valued at 102% of the market value of the securities plus any accrued interest. Non-U.S. securities are loaned versus collateral valued at 105% of the market value of the securities plus any accrued interest.

Non-cash collateral cannot be pledged or sold unless the borrower defaults. The average term of MPERS's loans was approximately 63 days as of June 30, 2004.

Cash open collateral is invested in a short term investment pool, the Core USA Collateral Section, which had an interest sensitivity of 24 days as of this statement date. Cash collateral may also be invested separately in "term loans", in which case the investments match the loan term. These loans can be terminated on demand by either lender or borrower. There were no violations of legal or contractual provisions, no borrower or lending agent default losses known to the securities lending agent.

There are no dividends or coupon payments owing on the securities lent. Securities lending earnings are credited to participating clients on approximately the fifteenth day of the following month.

Indemnification would deal with a situation in which a client's securities would not be returned due to the insolvency of a borrower and Northern Trust would fail to live up to its contractual responsibilities relating to the lending of those securities. Northern Trust's responsibilities include performing appropriate borrower and collateral investment credit analyses, demanding adequate types and levels of collateral, and complying with applicable Department of Labor and Federal Financial Institutions Examination Council regulations concerning securities lending.

The collateral held (including both cash collateral recognized in the Statement of Plan Net Assets and non-cash collateral) were as follows:

Investment Type	2004	2003
Equities	\$ 59,723,508	\$ 94,953,552
Government & government		
sponsored securities	93,705,890	59,051,106
Corporate bonds	13,123,546	12,750,958
Total	\$ 166,552,945	\$ 166,755,616



#### For the Years Ended June 30, 2004 & 2003

#### 4. RECEIVABLES:

Receivables consist primarily of contributions owed and yet to be remitted by the employer, pending investment trades and interest and dividends.

Type	2004	2003
Contributions-MoDOT	\$ 2,535,201	\$ 2,464,871
Contributions-MSHP Non-Uniformed	382,254	360,921
Contributions-MSHP Uniformed	771,588	733,467
Contributions-Retirement System	5,464	0
Commission Recapture	13,905	0
Securities Lending (gross)	29,779	0
Amounts Due From Members	809	576
Accrued Interest and Dividends	4,328,993	4,984,622
Investment Sales	14,794,017	13,203,330
Totals	\$ 22,862,012	\$ 21,747,787

#### 5. CONTRIBUTIONS:

Contributions to the Retirement System are made by the Missouri Department of Transportation, the Missouri State Highway Patrol, and the System. Employees do not contribute to the Retirement System. The Retirement System's funding policy provides for actuarially determined employer contributions using the entry-age normal cost method on a closed group basis (consisting of normal cost and amortization of any unfunded accrued liabilities over a 32-year period. (The objective is to reduce the period by one year each year at least until FY06-07.) Actuarially determined rates, expressed as percentages of annual covered payroll, provide for amounts sufficient to fund those benefits designated by State statute to be funded in advance. Actuarial assumptions used to compute contribution requirements are the same as those used to compute the pension benefit obligation.

Contributions totaling \$87,567,579 and \$79,390,570 for fiscal years 2004 and 2003, respectively, represent funding of normal costs and amortization of the unfunded accrued liability. Contribution rates determined by the Retirement System's actuary for the years ended June 30, 2004 and 2003 are as follows:

200	)4	20	03
Non-Uniformed	Uniformed	Non-Uniformed	Uniformed
25.54%	38.40%	22.67%	32.56%

For FY03, the System's Board decided not to change the actual contribution rates from 2002 and charged 23.29% for non-uniformed and 34.94% for uniformed employees. FY04 actual rates were the same as the actuarially determined rates.

#### For the Years Ended June 30, 2004 & 2003

#### 6. CONCENTRATIONS:

No investments in any one organization (other than those issued or sponsored by the U.S. government) represent five percent of plan net assets.

#### 7. RELATED PARTY TRANSACTIONS:

The Retirement System reimburses the Missouri Department of Transportation for accounting, legal and information technology services. This amounted to \$101,165 as of June 30, 2004 and \$262,723 as of June 30, 2003.

The Missouri Department of Transportation rents office space from the Retirement System. This contract was effective July 1, 2003 and amounted to \$33,696 as of June 30, 2004.

#### 8. COMPENSATED DEFERRED ABSENCES:

Expenses for accumulated annual leave and compensatory time in lieu of overtime paid earned by employees are recorded when earned by the employee. The balance owed was \$65,048 and \$56,269 as of June 30, 2004 and 2003, respectively.

#### 9. RETIREMENT PLAN:

At June 30, 2003, the System employed ten (10) full-time employees and no part-time employees. Upon retirement, the benefits paid to Retirement System employees are considered to be administrative expenses of the System. The System has two retired employees. At June 30, 2004, the Retirement System employed eleven (11) full-time employees and no part-time employees. Full-time employees are members of the Retirement System. The System changed its accounting method and began accruing 25.54% of payroll for FY04, amounting to \$119,873. This amount has been recorded as both a contribution and administrative expense.

#### 10. CAPITAL ASSETS:

Changes in capital assets are summarized below (in thousands):

	6/30/03 Balance	Additions	Deletions/ Retirements	6/30/04 Balance
Land and Improvements	\$ 84	\$ 0	\$ 0	\$ 84
Buildings	562	20	0	582
Office Equipment	81	32	3	110
Depreciation (Less)	(39)	(31)	(2)	(68)
Total	\$ 688	\$ 21	\$ 1	\$ 708



For the Years Ended June 30, 2004 & 2003

#### 11. LONG-TERM OBLIGATIONS - CAPITAL LEASES:

Changes in long-term obligations were as follows:

Туре	Beginning Balance	Additions	Reductions	Ending Balance
Capital Leases	\$ 0	\$22,490	\$4,591	\$17,899

Description: 2004 lease-purchase of one Xerox Workcentre Pro, due in monthly installments of \$413 through September 30, 2008, interest at 7.774%.

Principal and interest requirements for the lease-purchase are as follows:

Year Ended June 30	Principal	Interest	Total
2005	\$ 3,697	\$ 1,262	\$ 4,959
2006	3,995	964	4,959
2007	4,317	642	4,959
2008	4,665	294	4,959
2009	1,225	15	1,240
Totals	\$ 17,899	\$ 3,177	\$21,076

#### 12. OPERATING LEASES:

The System is committed under leases for various office equipment and technology services. Rental expenditures for the year ended June 30, 2004 and 2003 amounted to \$21,428 and \$4,558 respectively. Future minimum lease payments for these leases are as follows:

Year Ending	Amount
2005	\$ 27,975
2006	27,975
2007	22,585
2008	10,200



### NOTES TO FINANCIAL STATEMENTS

For the Years Ended June 30, 2004 & 2003

#### 13. COMPARATIVE STATEMENTS:

Some information has been restated to improve comparability.

#### 14. RISK MANAGEMENT:

The System is exposed to various risks of loss related to natural disasters, asset theft or damage, errors and omissions, torts, and employee injuries.

The System has purchased commercial insurance related to capital asset loss and damage. Ancillary coverage provided through the property policy includes coverage for accounts receivable, loss of money and securities, employee dishonesty, and forgery and alterations. The System carries a \$2 million umbrella liability policy. The System has coverage through Missouri Highways and Transportation Commission's Self-Insurance Fund related to workers' compensation. All state employees and officers are covered by the State's Legal Expense Fund, and the System has purchased a public official surety bond for the director. In addition, the System's computer mainframe is housed off-site.

### SCHEDULE OF FUNDING PROGRESS (1)

### REQUIRED SUPPLEMENTARY INFORMATION For the Year Ended June 30, 2004

Date of Valuation	Actuarial Asset Value (a)	Actuarial Accrued Liability (AAL)- Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)		UAAL as a Percentage of Covered Payroll [(b-a)/c]
06/30/1995	\$ 831,031,253	\$ 1,330,909,279	\$ 499,878,026	62.44%	\$ 243,561,510	205.24%
06/30/1996	916,553,828	1,429,910,844	513,357,016	64.10	254,712,739	201.54
06/30/1997	1,015,906,708	1,651,811,690	635,904,982	61.50	271,070,643	234.59
06/30/1998	1,126,961,804	1,744,052,411	617,090,607	64.62	278,690,426	221.43
06/30/1999(3)	1,242,744,403	2,052,700,427	809,956,023	60.54	288,068,083	(2) 281.17
06/30/2000(4)	1,339,228,528	2,180,963,695	841,735,167	61.41	301,421,805	(2) 279.25
06/30/2000(5)	1,422,796,011	2,188,826,322	766,030,311	65.00	301,421,805	(2) 254.14
06/30/2001	1,520,800,409	2,301,402,527	780,602,118	66.08	323,400,023	(2) 241.37
06/30/2002	1,450,507,432	2,358,452,163	907,944,731	61.50	308,654,239	(2) 294.16
06/30/2003	1,363,952,522	2,418,145,741	1,054,193,219	56.40	319,345,949	(2) 330.11
06/30/2004	1,331,588,207	2,492,918,976	1,161,330,769	53.41	316,224,468	(2) 367.25

<sup>(1)</sup> Since the Long-Term Disability (LTD) Plan uses the aggregate funding method, this schedule is not required for the LTD Plan and the assets and liabilities have been excluded.

#### NOTES TO THE SCHEDULES OF TREND INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date	June 30, 2004
Actuarial Cost Method	Entry Age
Amortization Method	
Remaining Amortization Period	32 Years
Asset Valuation Method	3-Year Smoothing
	_

### Actuarial Assumptions:

Investment Rate of Return	8.25%
Projected Salary Increases	4.3% to 8.0%*
*Includes Inflation at	4.0%
Cost-of-living Adjustments	3.5%

<sup>(2)</sup> Estimated.

<sup>(3)</sup> Introduction of Year 2000 Plan; change in actuary.

<sup>(4)</sup> Old assumptions.

<sup>(5)</sup> New assumptions adopted.

### SCHEDULE OF EMPLOYER CONTRIBUTIONS (1) AND DEVELOPMENT OF NET PENSION OBLIGATIONS

### REQUIRED SUPPLEMENTARY INFORMATION For the Year Ended June 30, 2004

Uniformed

Fiscal Year Ending	Covered Payroll	Actual Employer Contributions	Actual Employer Contribution %	Annual Required Contribution (ARC)%	Annual Pension Cost (APC)	Percentage of APC Contributed	Net Pension Obligation
06/30/1995 \$	35,232,287	\$ 14,462,854	41.05%	41.05%	\$ 14,462,854	100.00%	0
06/30/1996	39,557,621	15,743,114	39.17 (3)	39.17	15,743,114	100.00	0
06/30/1997	42,242,106	16,546,233	39.17	39.17	16,546,233	100.00	0
06/30/1998	43,987,039	16,600,708	37.74	37.74	16,600,708	100.00	0
06/30/1999(4)	43,882,573(2)	13,901,999	31.68	31.68	13,901,999	100.00	0
06/30/2000(5)	44,297,237(2)	13,484,079	30.44	30.44	13,484,079	100.00	0
06/30/2001	50,088,675(2)	17,500,983	34.94	34.94	17,500,983	100.00	0
06/30/2002	47,681,511(2)	16,659,920	34.94	34.94(6)	16,659,920	100.00	0
06/30/2003	48,172,519(2)	16,831,478	34.94	34.94(6)	16,831,478	100.00	0
06/30/2004	46,333,484(2)	17,792,058	38.40	38.40	17,792,058	100.00	0

- (0) Contributions for the Long-Term Disability Plan are de minimus and are excluded from this schedule.
- (2) Estimated.
- (3) 41.05% 7/1/95-10/31/95 & 39.17% 11/1/95-6/30/96
- (4) Introduction of Year 2000 Plan; change in actuary.
- (5) New assumptions adopted.
- 60 The ARC is the rate adopted by the Retirement System, the actuarially calculated rate was 32.93%.

#### Non-Uniformed

Fiscal Year Ending	Covered Payroll	Actual Employer Contributions	Actual Employer Contribution %	Annual Required Contribution (ARC)%	Annual Pension cost (APC)	Percentage of APC Contributed	Net Pension Obligation
06/30/1995	\$208,329,222	\$56,144,725	26.95%	26.95%	\$56,144,725	100.00%	0
06/30/1996	215,155,118	56,842,321	26.15(3)	26.15	56,842,321	100.00	0
06/30/1997	228,828,537	59,383,662	26.15	26.15	59,838,662	100.00	0
06/30/1998	234,703,387	61,140,232	26.05	26.05	61,140,232	100.00	0
06/30/1999(4)	244,185,511(2)	54,990,577	22.52	22.52	54,990,577	100.00	0
06/30/2000(5)	257,124,568(2)	56,567,405	22.00	22.00	56,567,405	100.00	0
06/30/2001	273,311,348(2)	63,654,213	23.29	23.29	63,654,213	100.00	0
06/30/2002	260,972,726(2)	60,780,548	23.29	23.29 (6)	60,780,548	100.00	0
06/30/2003	271,173,431(2)	63,156,292	23.29	23.29 (6)	63,156,292	100.00	0
06/30/2004	269,890,983	68,932,856	25.54	25.54	68,932,856	100.00	0

- (1) Contributions for the Long-Term Disability Plan are de minimus and are excluded from this schedule.
- (2) Estimated.
- (3) 26.95% 7/1/95-10/31/95 & 26.15% 11/1/95-6/30/96
- (4) Introduction of Year 2000 Plan; change in actuary.
- (5) New assumptions adopted.
- (6) The ARC is the rate adopted by the Retirement System, the actuarially calculated rate was 22.60%.



### SCHEDULE OF ADMINISTRATIVE EXPENSES

### SUPPLEMENTARY INFORMATION For the Year Ended June 30, 2004

	2004	2003
Personal Services:		
Salary expense	\$ 466,237	\$ 378,621
Employee benefit expense	273,965	156,568
Total Personal Services	740,202	535,189
Professional Services:		
Actuary fee	117,937	115,190
Information systems	290,640	93,283
Audit expense	9,260	9,620
Disability program	19,938	5,225
Custodian search	E.	73,043
Consultant fees	73,500	15,000
Other	501	5,443
Total Professional Services	511,776	316,804
Miscellaneous:		
Agency expense	101,165	262,723
Depreciation	30,831	28,099
Meetings/Travel/Education	68,462	49,881
Equipment/Supplies	38,945	55,778
Printing/Postage	66,788	50,540
Insurance premium	2,436	2,782
Bank service charge	5,517	5,541
Building expenses	24,950	91,226
Other	48,062	53,292
Total Miscellaneous	387,155	599,862
TOTAL ADMINISTRATIVE EXPENSES	\$ 1,639,133	\$ 1,451,855

### SCHEDULE OF INVESTMENT EXPENSES

### SUPPLEMENTARY INFORMATION For the Year Ended June 30, 2004

	2004	2003
Management		
Alliance Capital	\$ 222,698	\$ 400,796
Artisan Partners	531,172	422,071
Barclays Global Investors	205,708	
Enhanced Investment Technologies	209,488	
Principal Global Investors	104,971	-
RMK Timberland	282,601	282,601
Rockwood Capital Advisors	245,677	262,857
Rothschild Asset Management	597,078	484,392
Silchester International Investors Limited	45,139	-
The Northern Trust Company	44,297	19,930
UMB Investment Advisors	877,316	279,002
Wellington Management Company	313,342	543,256
Total	\$ 3,679,487	\$ 2,694,905
Other		
Securities lending (netted against FY03 income)	142,787	
Investment custodial fee	150,175	96,463
Performance management	18,150	9,000
Monitoring fee	123,750	95,000
Other investment expenses	(5,931)	116,285
Total	\$ 428,931	\$ 316,748
TOTAL INVESTMENT EXPENSES	\$ 4,108,418	\$ 3,011,653



# Investment Section

### In This Section

Letter from Chief Investment Officer

Letter from Consultant

Investment Overview

Schedule of Investment Expenses

Investment Summary

Time Weighted Percentage Rates of Return

Largest Investment Holdings

Schedule of Brokerage Commissions



### LETTER FROM CHIEF INVESTMENT OFFICER

Norm Robinson Executive Director



Susie Dahl Assistant Executive Director

January 25, 2005

To the Members of the MoDOT & Patrol Employees' Retirement System:

It is my pleasure to provide you with the investment section of this year's comprehensive annual financial report. This section is a supplement to the comprehensive report and provides an overview of developments and performance within the investment portfolio.

As the System's first Chief Investment Officer, my role is very clear – to act in the exclusive interest of you, the members of the system, to administer and monitor the system's investment portfolio. With that in mind, the day to day functions revolve around building an investment portfolio that will generate a total return that, when added to employer contributions, is sufficient to meet benefit obligations.

In the past, the MPERS' investment portfolio was relatively straight forward, relying on the traditional asset classes of stocks and bonds to deliver the targeted returns. This was supported by the return environment in the capital markets, where a conservative asset allocation of 55% equities and 45% bonds generated double-digit annual returns for much of the 80's and 90's. Given this environment, the issue of hiring active money managers and dedicated investment staff simply wasn't a priority. In fact, the Wall Street Journal would regularly post the results of its "dart board challenge", where top investment managers would put their best stock picks against a random portfolio of stocks generated by throwing darts at the paper. The end results often made the darts look pretty smart.

Today, the MPERS portfolio is in a state of transition and looks quite different from that of years past. The Board of Trustees retained a new investment consultant, completely new asset classes have been added to the portfolio, and a number of new external asset managers were hired within the traditional asset classes. To explain why these changes are necessary, you need to first examine the dynamics of how a pension fund operates. In putting together an investment portfolio, you must make assumptions as to the growth rate of existing and future benefit payments (the System's liabilities). This rate is utilized to discount the System's benefit payments into a present value of liabilities. It is also referred to as the actuarial assumed rate of return for the investment portfolio (the System's assets). The ratio between the discounted value of liabilities and the actuarial value of assets is referred to as the System's funded status. Changes in the System's funded status are primarily driven by the relative growth of assets vs. liabilities. If liabilities grow at a faster rate than the System's assets, then the funded status falls and employer contributions will be forced higher. If assets grow at a faster pace, then the funded status improves and employers should be able to increase retirement benefits without increasing contributions or reduce contributions and make funds available for wage increases or other benefits.

Ideally, the discounted value of the System's liabilities will be equal to or less than the System's assets (the investment portfolio), creating a funded status in excess of 100%. Here at MPERS, life is not so simple. As illustrated in a number of locations throughout this full report, MPERS' current funded status stands at 53%. This means that for every \$1.00 of existing and projected benefit payments, we have set aside approximately 53 cents to make the payments. For the retirement system, this alone is not a cause for concern – it simply means that our plan sponsors (MoDOT and the Missouri Highway Patrol) have to contribute additional funds each year to pay off the unfunded obligation. The total contributions from plan sponsors include the normal cost of funding retirement benefits, as well as the unfunded liability, which is amortized over longer periods of

time. To date, our plan sponsors have always contributed the amount recommended by the actuary that covers both the normal cost and the current year's portion of the unfunded liability.

Since the future growth of liabilities is unknown, you must make assumptions as to the appropriate growth rate going forward. The MPERS board, with the assistance from consultants and actuaries, has adopted an actuarial assumed rate of 8.25%. This represents the assumed rate of growth for System liabilities, and is also the corresponding return target for the investment portfolio. In the past, the traditional asset allocation of 55% stocks and 45% bonds produced returns well in excess of this assumed rate and the System was able to provide significant benefit increases while keeping the funded status relatively constant. But along came the new millennium and with it a prolonged correction by the equity markets. A weakening economy and overvalued equities led investors out of the riskier equity markets and running towards the higher quality fixed income markets.

This brings us to the issue of why we are restructuring the investment portfolio. Today, the investment outlook remains very challenging. Returns in the fixed income markets, which historically have averaged around 8 percent, are now projected between 4 and 5 percent. The equity markets have rebounded nicely from the prolonged correction, but once again appear overpriced given their current valuations. Gone are the days where MPERS traditional 55/45 mix between equities and bonds is expected to generate annual returns of 8.25%. Identifying this challenge, the system began to make a number of transitions to better position the portfolio to take advantage of the relative opportunities that exist today. Given the low expected returns in the fixed income sector, the Board made its' initial investment into the real estate sector to take advantage of the historically wide yield spread between real estate and traditional fixed income. The Board also approved the expanded investment into international equities, increasing the target allocation from 15 to 20 percent of assets. Securities denominated in foreign currencies offer protection against a depreciating U.S. Dollar and provide diversification benefits to the overall equity portfolio.

Looking to the future, we continue to explore new methods to tackle today's investment challenge. Working with our consultant, we are in the process of conducting a formal asset/liability study that will generate a recommendation for new asset allocation targets. The study will include an in-depth analysis of both traditional and non-traditional asset classes, with the desired outcome of developing an investment portfolio that will achieve the targeted return without subjecting the system to unnecessary risk. Included in these non-traditional or "alternative" asset classes are real estate and timber sectors, to which we already have investments, along with new asset classes such as private equity and absolute return hedge fund strategies. Institutional investors, acknowledging the low return environment with traditional asset classes, are increasingly looking to these alternative asset classes as a means to diversify the portfolio and reduce the overall volatility (risk) without compromising returns.

Overall, fiscal year 2004 will go down as a landmark year for the MPERS' investment portfolio. We have made a lot of changes in a short period of time, and have been fortunate to see some short-term success. Before concluding, I want to thank the Board of Trustees and our Executive Director for providing the opportunity to serve as your Chief Investment Officer. We are fortunate to have a cohesive Board of Trustees that is willing to set aside any personal agendas and make decisions based on the best interest of plan participants. You can't help but feel the best is yet to come. And to the members of the System, you can rest assured that your assets are being managed in the best manner possible to ensure your benefit checks are mailed or deposited each and every month as promised.

Sincerely,

Larry Krummen, CFA

### LETTER FROM CONSULTANT



### Summit Strategies Group

7700 Bonhomme Avenue, Suite 300 St. Louis, Missouri 63105 telephone 314/727-7211 fax 314/727-6068 www.summitstrategies.com

December 20, 2004

Mr. Norm Robinson Executive Director MoDOT & Patrol Employees' Retirement System 1913 William Street Jefferson City, MO 65109

Dear Mr. Robinson:

As you know, this is the first fiscal year review that Summit Strategies Group has prepared for the MoDOT & Patrol Employees' Retirement System. We were honored to be selected as your investment consultant in early 2004, and on behalf of my partners I would like to offer a sincere "thank you"!

Performance for the fiscal year ended June 30, 2004 was good both in absolute and relative terms with a return of 15.2% for the one-year period. For the 3- and 5-year periods, the fund earned 3.9% and 2.5%, respectively. These returns were calculated in compliance with AIMR Performance Presentation Standards. On June 30, the System's total assets were \$1,349,531,516. Of this, 63.76% was invested in equities, 28.81% was invested in fixed income and cash equivalents, 3.0% was invested in timberland, and 3.8% was invested in real estate.

The 15.2% return for the year exceeded the fund's policy index and also outperformed the median public fund in our peer universe. The domestic equity portfolio returned 22.2% and the international equity portfolio generated a robust 29.8%. These returns are stellar relative to what we have seen over the bear market of the last few years, and while we are glad to have them we certainly do not believe they are sustainable at these levels. The strong equity performance was offset to some extent by the relatively lackluster results in the fixed income portfolio, which earned a slightly positive 0.9% for the period. Though low in absolute terms, the System's fixed income investments did outperform the bond markets by 0.6% for the year.

What is truly interesting here is that the performance of the capital markets in this fiscal year is almost the exact opposite of last year – in which stocks were flat to negative and bonds were up over 10%. This is a very practical example of the benefits of maintaining a well-diversified portfolio!

Since assuming our role as your investment consultant we have taken many steps with you, your staff and the Board of Trustees to improve upon the investment program of the MoDOT & Patrol Employees' Retirement System. I will cover the success of those efforts in next year's performance review and in subsequent reviews in the years to come. Thank you again for the confidence and trust you have placed in us.

Sincerely,

Mark A. Caplinger, CFA Senior Vice President

### INVESTMENT OVERVIEW

### Summary of Investment Policy

The primary objective of MPERS is to provide active and retired employees with adequate retirement benefits. The Board of Trustees oversees an investment portfolio that is constructed to generate a total return that, when added to employer contributions, is sufficient to meet benefit obligations. Following prudent standards for preservation of capital, the goal is to achieve the highest possible rate of return consistent with the plan's tolerance for risk as determined by the Board of Trustees in its role as fiduciary.

Investment management is delegated to external asset managers. The managers operate within the set of guidelines, objectives and constraints set forth in their respective investment management agreement.

#### Market Value of Investments

As of June 30, 2004, the MPERS' investment portfolio had a market value of \$1.35 billion, representing an increase of \$112 million over fiscal year-end 2003. Over the course of the year, an additional \$72.5 million was transferred out of the fund to meet benefit payments. When viewed together, asset growth from investments equated to \$184.5 million.

#### Investment Performance

The MPERS' investment portfolio returned 15.24% in fiscal year 2004, based on time-weighted rates of return and market valuations. Performance for the various sub-asset classes and their respective benchmark indices are listed below.

Sub-Asset Class	Fiscal Year Return	Benchmark Return
Total Fund	15.2%	13.5%
Large Cap Composite	19.7	19.1
Mid Cap Growth	28.5	27.3
Small Cap Composite	30.8	33.4
Total Domestic Equity	22.2	20.5
International Equity	29.8	32.9
Fixed Income	1.0	0.3
Timber	2.9	9.2
Cash	1.0	1.0

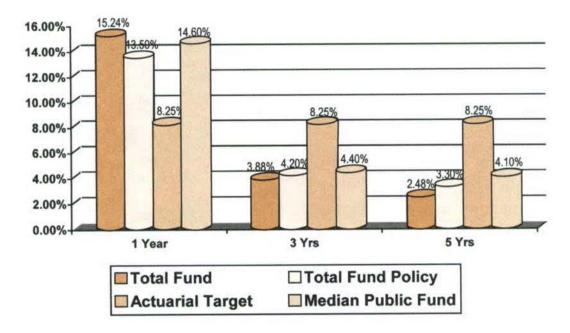
When measuring performance, the Board of Trustees looks at three primary performance objectives: a) achieve the actuarial assumed rate of return of 8.25%, b) outperform a policy benchmark that represents the return that could be achieved by investing passively in the broad markets in the same percentages to MPERS' target asset allocation, and c) rank at or above the median public fund investment return.

### INVESTMENT OVERVIEW

MPERS' one-year return compares favorably to all three of the stated performance goals. Much of this out-performance is attributed to the overweight status of the fund to public equities, which returned 23.57% over the period. Although the equity group as a whole under-performed its respective benchmark, the overweight position to the asset class relative to the target allocation helped the overall portfolio exceed the broad policy benchmark.

The relatively strong performance in fiscal year 2004 was not enough to compensate for the poor returns seen over the past three and five-year periods, where MPERS' investment return falls below the policy benchmark and the median public fund universe. The underperformance of the fund relative to policy benchmarks and the public fund peer universe is part of the reasoning behind the current restructuring underway at MPERS. The system's first Chief Investment Officer was hired in December of 2003, providing a dedicated full-time investment professional working exclusively to monitor and improve the performance of the fund. In April of 2004, the Board retained a new investment consultant, Summit Strategies out of St. Louis, to assist the CIO and the Board with the oversight and implementation of the investment portfolio. In addition, a number of new external asset managers were added along with completely new asset classes. The Board of Trustees are confident the changes underway will lead to improved relative returns in the future.

Historical returns versus the various performance goals are listed below:



#### Asset Allocation Overview

At the onset of fiscal year 2004, MPERS' broad asset allocation target was 55% public equity (40% domestic and 15% International), 35% fixed income, 5% real estate, 3% timber and 2% cash. Throughout the year a number of changes were made to take advantage of relative opportunities in the marketplace. The first significant move was the initial funding of the 5% target allocation to real estate. The Board of Trustees had delayed funding the asset class until the hiring of a Chief Investment Officer

### INVESTMENT OVERVIEW

to assist with the search. MPERS made its initial investment in April of 2004, and continues to review additional managers and structures within the asset class. Real estate continues to grow as an institutional asset class, and currently offers an attractive income spread over traditional fixed income securities.

Also in fiscal year 2004, the Board increased the target allocation to International Equities from 15% to 20%, and completely restructured the composition of external managers within the sector. Exposure to securities denominated in foreign currencies provides protection against the depreciation of the U.S. Dollar and offers diversification to the overall equity portfolio. While the system has been a long-term investor in International Equities, the existing structure was highly correlated to the domestic equity portfolio, limiting the diversification benefits. To both improve expected returns and reduce overall volatility, the fund transitioned into three new external asset managers with deep resources and long-term track records of researching and investing in the overseas markets. Funding for the increased allocation came from the fixed income sector which, given the historically low yield environment, offered minimal upside potential and appeal from a total fund perspective.

At the end of fiscal year 2004, the revised asset allocation targets were 60% public equity (40% Domestic and 20% International), 30% public debt, 5% real estate, 3% timber and 2% cash. The chart below lists the target and actual allocations to the various sub-asset classes within the portfolio.

Asset Class	Target Allocation	Actual Allocation as of 6/30/04
Public Equity	60%	63.76%
Domestic equity	40%	43.43%
International equity	20%	20.33%
Public Debt	30%	28.81%
Real Estate	5%	3.81%
Timber	3%	3.04%
Cash	2%	0.58%

Looking forward to fiscal year 2005, we continue to look for additional asset classes and strategies to improve the risk and return characteristics of the fund. Staff, along with the external asset consultant, are in the process of conducting a formal asset/liability study to reexamine the asset allocation targets of the fund. The overall goal is to improve the efficiency of the portfolio by improving the expected rate of return while reducing overall volatility (risk) of the portfolio.

### SCHEDULE OF INVESTMENT EXPENSES

### SUPPLEMENTARY INFORMATION For the Year Ended June 30, 2004

	Manag	Assets Under gement at 6/30/04 narket value)		Accrueding FY04
Management				
Acadian Asset Management*	\$	132,143,778	\$	0
Alliance Capital**		0		222,698
Artisan Partners		75,425,296		531,172
Barclays Global Investors		142,752,401		205,708
Enhanced Investment Technologies		142,614,583		209,488
Julius Baer Investment Management*		108,698,250		0
Principal Global Investors		51,375,544		104,971
RMK Timberland		41,063,671		282,601
Rockwood Capital Advisors		144,941,862		245,677
Rothschild Asset Management		115,432,163		597,078
Silchester International Investors Limited		30,976,092		45,139
The Northern Trust Company		117,728,682		44,297
UMB Investment Advisors		246,379,194		877,316
Wellington Management Company**	y <u></u>	0		313,342
Total	\$ 1	1,349,531,516	\$3	,679,487
Other				
Securities lending			\$	142,787
Investment custodial fee				150,175
Performance management				18,150
Monitoring fee				123,750
Other investment expenses				(5,931)
Total			\$	428,931
TOTAL INVESTMENT EXPENSES			\$4	,108,418

<sup>\*</sup> Managers were funded at end of June and did not charge a fee for the period.

<sup>\*\*</sup> Managers were dismissed during the fiscal year.

## INVESTMENT SUMMARY AMOUNTS REPORTED BY MANAGEMENT - TYPE ALLOCATION

### For the Year Ended June 30, 2004

	06/30/03						06					
		Book Value		Market Value	Acquisitions		Dispositions		Book Value		Market Value	% of Market
Fixed Income	\$	411,508,361	\$	428,799,939	\$ 244,911,128	\$	(270,128,528)	\$	386,290,961	\$	388,751,183	28.81%
Domestic Equity		581,691,303		619,661,585	569,066,017		(635,093,661)		515,663,659		586,115,755	43.43%
International Equity		124,114,944		143,009,564	340,553,513		(196,738,153)		267,930,304		274,387,994	20.33%
Short Term		6,110,538		6,110,538	149,137,882		(147,411,049)		7,837,370		7,837,371	0.58%
Real Estate		0		0	50,004,167		0		50,004,167		51,375,542	3.81%
Timber		29,015,868		39,790,333	0		(271,553)		28,744,315		41,063,671	3.04%
Total Investments	\$1	1,152,441,014	\$1	,237,371,959	\$ 1,353,672,707	\$(	1,249,642,944)	\$1	,256,470,776	\$1	,349,531,516	100.00%

#### Reconciliation to Statement of Plan Net Assets:

Less Accrued Income	\$ (4,195,757)
Less Deferred Interest Purchased	(133,236)
Less Investment Sales Receivable	(14,794,017)
Plus Investment Purchases Payable	4,992,236
Currency Adjustment	22,317
	\$ 1,335,423,059

### TIME WEIGHTED PERCENTAGE RATES OF RETURN

### Year Ended June 30, 2004

### Long-Term Averages

	1 Year	3 Years	5 Years
Total Fund	15.24%	3.88%	2.48%
Equity	23.57%	2.37%	-1.67%
Fixed Income	0.95%	5.64%	6.34%
Real Estate	n/a	n/a	n/a
Timber	2.85%	5.47%	n/a
Cash	0.98%	1.37%	0.94%

### LARGEST INVESTMENT HOLDINGS

### Year Ended June 30, 2004

### Largest Equity Securities - Non-Commingled Funds

Shares	Security	Market Value
1,038,300	BP ORD	\$ 9,170,000.94
378,300	HSBC HLDGS ORD	5,625,585.87
92,600	CANON INC	4,879,714.06
341,600	STATOIL ASA NOK	4,336,839.07
128,529	BOUYGUES	4,303,434.54
695,000	KOMATSU NPV	4,210,191.08
418,282	WILLIAM HILL ORD	4,202,391.46
320,500	SABMILLER PLC ORD	4,147,052.91
189,100	REPSOL YPF SA	4,141,233.11
318,800	TELKOM SA	4,082,343.76

### Largest Fixed Income Securities

Par	Security	
\$14,420,000	US TREAS NTS 5.75 DUE 11-15-2005 \$	15,077,350
11,600,000	US TREAS NTS DTD 00037 1.625 DUE 10-31-2005	11,496,690
7,500,000	US TREAS NTS INFLATION INDEX 3.875 DUE 01-15-2009	9,594,667
7,200,000	FHLB BDS 5.375 02-15-2007	7,547,738
7,400,000	US TREAS NTS DTD 00046 1.875 DUE 01-31-2006	7,329,471
6,804,121	GNMA POOL #781690 6% 12-15-2033	6,985,996
6,455,994	GNMA POOL #781276 SER 2031 6.5% DUE 04-15-2031	6,757,889
6,246,046	GNMA POOL #569625 SER 2017 5.5% DUE 02-15-2017	6,434,614
5,870,000	US TREAS BDS USD1000 5.25% DUE 02-15-2029	5,755,353
5,375,051	GNMA POOL #569460 SER 2017 5.5% DUE 01-15-2017	5,537,324

Space and cost restrictions make it impractical to print the entire investment portfolio in this report. However, a portfolio listing is available for review in the office of the Executive Director of MPERS.

### SCHEDULE OF BROKERAGE COMMISSIONS

Investment Brokerage Firm	Commission	Shares	Commission Rate
DEUTSCHE BANK SECURITIES INC	\$ 81,114.80	35,295,450	\$ 0.002
NORTHERN TRUST CO	72,092.60	1,636,699	0.044
ALEX BROWN AND SONS NEW YORK	57,838.39	6,672,720	0.009
BNY ESI SECURITIES CO.	44,909.41	9,837,523	0.005
MERRILL LYNCH PIERCE FENNER & SMITH	40,121.06	1,015,800	0.039
MERRILL LYNCH INTERNATIONAL	39,640.47	1,302,040	0.030
LEHMAN BROTHERS INC	38,554.50	9,293,527	0.004
MORGAN STANLEY & CO INC. NEW YORK	30,656.03	5,679,600	0.005
GOLDMAN SACHS & COMPANY	29,116.00	16,892,200	0.002
CITIGROUP GLOBAL MARKETS INC/SMITH BARNEY	25,376.90	1,511,550	0.017
BANC AMERICA SECUR. MONTGOMERY DIV.	24,911.50	514,500	0.048
JEFFERIES & COMPANY	20,433.80	1,232,040	0.017
WACHOVIA CAPITAL MARKETS LLC	18,165.40	373,090	0.049
CREDIT SUISSE FIRST BOSTON CORPORATION	17,987.20	395,600	0.045
JONES AD	17,610.00	352,200	0.050
UBS/WARBURG SECURITIES LLC NEW YORK	17,211.00	3,632,700	0.005
ROBERT W. BAIRD & COMPANY INC MILWAUKEE USA	16,624.90	451,100	0.037
B TRADE SERVICES	15,021.10	786,440	0.019
J.P. MORGAN SECURITIES INC	12,552.70	1,905,080	0.007
CIBC WORLD MARKETS CORP. NEW YORK	12,531.90	254,800	0.049
PERSHING LLC FORMERLY DLJ	12,286.00	236,300	0.052
PXP SECURITIES CORP	11,769.80	236,900	0.050
SG COWEN AND COMPANY	11,735.30	285,608	0.041
CAPITAL INSTITUTIONAL SERVICES	11,235.00	31,000,000	0.000
MERRILL LYNCH CAPITAL MARKETS	10,451.43	213,463	0.049
BEAR, STEARNS, SECURITIES CORP	10,381.70	221,700	0.047
RAYMOND JAMES	9,267.00	8,451,954	0.001
ROSENBLATT SECURITIES INC	8,808.00	440,400	0.020
WEEDEN AND & CO	8,801.00	407,100	0.022
MERRILL LYNCH FENNER & SMITH INC	8,300.64	359,683	0.023
SOUNDVIEW FINANCIAL GROUP	8,164.00	166,200	0.049
LYNCH JONES & RYAN	8,086.50	179,600	0.045
GOLDMAN EXECUTING & CLEARING	8,058.50	17,395,394	0.000
WACHOVIA SECURITIES LLC	7,682.50	158,950	0.048
DIRECT BROKERAGE INC.	7,643.00	455,000	0.017
EDWARDS, A.G.	6,830.50	43,608,197	0.000
ONES & ASSOCIATES	6,383.00	208,800	0.031
BERNSTEIN, SANFORD C. & CO	6,340.30	127,800	0.050
THOMAS WEISEL PARTNERS LLC	5,862.00	119,700	0.049
MIDWEST RESEARCH SECURITIES	5,553.70	115,300	0.048
STEPHENS INC	5,075.00	129,700	0.039
MCDONALD AND COMPANY	5,067.10	217,700	0.023
GUZMAN & COMPANY	4,700.00	229,300	0.020
SCOTT & STRINGFELLOW INVESTMENT	4,572.90	168,600	0.027
MERRILL LYNCH INTL LTD EQUITIES	4,543.57	714,700	0.006
PRUDENTIAL EQUITY GROUP	4,500.10	380,600	0.012
ANDHAM SECURITIES CORP	4,149.00	138,300	0.030
SUNTRUST ROBINSON HUMPHREY	3,987.70	88,200	0.045
BLAIR, WILLIAM & CO	3,680.00	73,600	0.050
ABN AMRO SECS USA INC DTC 792	3,645.95	63,000	0.058
A BRANCHE FINANCIAL #2	3,603.00	283,050	
FACTSET DATA SYSTEMS	3,548.30		0.013
		78,500	0.045
ALL OTHER FIRMS (LESS THAN \$3,500)	97,945.13	_31,095,024	0.003

Broker commissions rebated to the System for the fiscal year ended June 30, 2004 amounted to \$98,556.52.



# Actuarial Section

### In This Section

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Summary of Plan Provisions

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Actuarial Section

### ACTUARY'S CERTIFICATION LETTER



#### **GABRIEL, ROEDER, SMITH & COMPANY**

Consultants & Actuaries

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December 17, 2004

The Retirement Board
Missouri Department of Transportation
and Highway Patrol Employees' Retirement System
P.O Box 1930
Jefferson City, Missouri 65102-1930

Dear Board Members:

The basic financial objective of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) is to establish and receive contributions which

- (1) when expressed in terms of percents of active member payroll, will remain approximately level from generation to generation of Missouri citizens, and which
- (2) when combined with present assets and future investment return, will be sufficient to meet the present and future financial obligations of MPERS.

In order to measure progress toward this fundamental objective, MPERS has annual actuarial valuations performed. The valuations (i) measure present financial position, and (ii) establish contribution rates that provide for the current cost and level percent-of-payroll amortization of unfunded actuarial accrued liabilities over a reasonable period. An actuarial valuation was performed based upon benefit conditions, data and assumptions as of June 30, 2004. This valuation indicates that contribution rates for the period beginning July 1, 2005 that are at least equal to the calculated contribution rates will meet the Board's financial objective. The calculated contribution rates are 30.49% of payroll for the 7,961 Non-Uniformed employees and 44.27% of payroll for the 1,041 Uniformed patrol employees.

The actuarial valuations are based upon financial and participant data which is prepared by retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death, and disability among MPERS' members and their beneficiaries. We review the data for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Trustees and were based upon actual experience of MPERS during the period July 1, 1994 to June 30, 1999. Assets were valued using a three-year smoothing method. The assumptions and methods utilized in this valuation, in our opinion, meet the parameters established by Governmental Accounting Standards Board Statement No. 25.

The current benefit structure is outlined in this section. We provided the information used in the supporting schedules in the actuarial section and the Schedules of Funding Progress in the financial section, as well as the employer contribution rates shown in the Schedule of Employer Contributions in the financial section.

Based upon the valuation results, it is our opinion that the Missouri Department of Transportation and Highway Patrol Employees' Retirement System continues to be in sound condition in accordance with actuarial principles of level percent-of-payroll financing. Over the past few years, the funded status has dropped, largely due to continuing effects of weak 2000-2002 investment markets. If the funding status continues to fall, an increase in the contribution rate above current levels may be necessary.

Respectfully submitted, Brian B- Mryth

Brian B. Murphy, F.S.A.

Senior Consultant & Actuary
BBM:rs:lr

Kenneth G. Alberts Consultant

Valuation DateJu	ne 30, 2004
Actuarial Cost Method	Entry Age
Amortization Method Level percent	nt of payroll
Remaining Amortization Period	32 years
Asset Valuation Method	r smoothing
Actuarial Assumptions:	
Investment Rate of Return	8.25%
Projected Salary Increase	3% to 8.0%
Includes Wage Inflation at	4%
Cost-of-Living Adjustments	Compound

An actuarial valuation is based upon an actuarial cost method, an asset valuation method, and actuarial assumptions. These methods and assumptions are chosen by the Board of Trustees after consultation with the Actuary and other advisors.

The actuarial cost method is called the Entry Age Actuarial Cost Method. This method is consistent with the Board's level percent of payroll funding objective. With this method, the level percent of payroll is determined that will fund a member's retirement benefit over the member's entire working lifetime, from date of hire (Entry Age) to date of exit from the active member population. Differences in the past between assumed and actual experience become part of unfunded actuarial accrued liabilities and are amortized with level percent of payroll contributions. This cost method was first used in the *June 30*, 1999 valuation.

The asset valuation method is a three year smoothed market value method in which assumed investment return is recognized immediately each year and differences between actual and assumed investment return are phased in over a closed three year period. This asset valuation method is intended to give recognition to the long term accuracy of market values while filtering out and dampening short term market swings. This method was first used in the *June 30*, 1999 valuation.

The actuarial assumptions used in producing the valuation fall into two broad classes: economic assumptions, and demographic assumptions. Economic assumptions refer to long term rates of investment return, wage growth, covered population growth, and inflation. Demographic assumptions refer to retirement rates, turnover rates, disability rates, merit and seniority pay increases, and mortality rates. The current assumptions are based upon a 1994-1999 study of experience of the MPERS. The assumptions are reviewed from time to time to keep them reasonably current with expected experience.

#### **Economic Assumptions**

The investment return rate used in making the valuation was 8.25% per year, compounded annually (net after administrative expenses). This rate of return is not the assumed real rate of return. The real rate of return over wage inflation is defined to be the portion of investment return which is more than the wage inflation rate. Considering wage inflation recognition of 4.0%, the 8.25% rate translates to an assumed real rate of return of 4.25%. This rate was first used for the June 30, 2000 valuation.



Pay increase assumptions for individual active members are shown on Tables IV and V. Part of the assumption for each age is for a merit and/or seniority increase, and the other 4.0% recognizes wage inflation. These rates were first used for the *June 30, 2000* valuation. No specific *Price Inflation* is needed for this valuation. However, the wage inflation and interest rate assumptions would be compatible with a price inflation assumption of 3.0% or 3.5%. It is assumed that the 2.8% COLA will always be paid.

The Active Member Group size is assumed to remain constant at its present level.

Total active member payroll is assumed to increase 4.0% a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. This rate was first used for the June 30, 2000 valuation.

#### Non-Economic Assumptions

The mortality table used to measure retired life mortality was the 1971 Group Annuity Mortality Tables projected to the year 2000 set back 1 year for males and 7 years for females. Related values are shown on Table I. This table was first used for the *June 30, 2000* valuation. Disabled pension mortality was based on PBGC Disabled Mortality tables.

The probabilities of retirement for members eligible to retire are shown on Tables II and III. The rates for full retirement were first used in the *June 30*, 2000 valuation. The rates for reduced retirement were first used in the *June 30*, 2000 valuation.

The probabilities of withdrawal from service, death-in-service and disability are shown for sample ages on Tables III and IV. The withdrawal and disability rates were first used in the June 30, 2000 valuation. The death-in-service rates were first used in the June 30, 2000 valuation.

The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.).

### RATES OF SEPARATION FROM ACTIVE EMPLOYMENT MORE THAN 5 YEARS OF SERVICE

Age	Non-Uniformed		Unifo	rmed
	Male	Female	Male	Female
25	4.00%	5.50%	2.50%	2.50%
30	3.40	5.20	1.80	1.80
35	2.50	4.60	1.40	1.40
40	1.80	3.50	1.10	1.10
45	1.30	3.00	0.90	0.90
50	0.08	2.60	0.70	0.70
55	0.04	1.40	0.20	0.20
60	0.01	0.01	0.10	0.10

### RATES OF SEPARATION FROM ACTIVE EMPLOYMENT LESS THAN 5 YEARS OF SERVICE

	Non-Uniformed		Unifo	rmed
Service	Male	Female	Male	Female
0-1	20.00%	16.00%	5.00%	5.00%
1-2	10.00	9.00	4.00	4.00
2-3	7.00	8.00	3.00	3.00
3-4	6.00	7.00	2.00	2.00
4-5	5.00	6.00	2.00	2.00



### AGE BASED SALARY SCALE

### Salary Increase Assumptions For an Individual Member

		Non-Uniformed			Uniformed	
Age	Merit & Seniority	Base (Economic)	Increase Next Year	Merit & Seniority	Base (Economic)	Increase Next Year
20	3.00%	4.00%	7.00%	4.00%	4.00%	8.00%
25	3.00	4.00	7.00	3.50	4.00	7.50
30	2.85	4.00	6.85	2.60	4.00	6.60
35	2.20	4.00	6.20	1.70	4.00	5.70
40	1.70	4.00	5.70	0.90	4.00	4.90
45	1.30	4.00	5.30	0.40	4.00	4.40
50	0.80	4.00	4.80	0.30	4.00	4.30
55	0.60	4.00	4.60	0.30	4.00	4.30
60	0.30	4.00	4.30	0.30	4.00	4.30

### SINGLE LIFE RETIREMENT VALUES

Sample Attained	Present Value of \$1 Monthly for Life			re Life ncy (years)
Ages	Men	Women	Men	Women
50	\$182.67	\$184.82	29.17	34.67
55	170.40	172.61	24.82	30.06
60	155.98	158.31	20.70	25.67
65	139.48	141.76	16.82	21.50
70	121.62	123.47	13.32	17.57
75	103.29	104.62	10.36	13.99
80	85.27	86.19	7.83	10.91

## PERCENT OF ELIGIBLE ACTIVE MEMBERS RETIRING NEXT YEAR Year Ended June 30, 2004

	Non-Uniformed		Uniformed		
Age	Male	Female	Male	Female	
50	12.00%	12.00%	50.00%	50.00%	
55	12.00	12.00	30.00	30.00	
60	16.00	10.00	100.00	100.00	
65	40.00	50.00	100.00	100.00	
70	100.00	100.00	100.00	100.00	

### PERCENT OF MEMBERS BECOMING DISABLED AT THE INDICATED AGE

### Year Ended June 30, 2004

	Non-Uniformed		Unifor	Uniformed	
Age	Male	Female	Male	Female	
25	0.01%	0.07%	0.04%	0.04%	
30	0.01	0.08	0.05	0.05	
35	0.06	0.12	0.07	0.07	
40	0.09	0.19	0.10	0.10	
45	0.21	0.34	0.15	0.15	
50	0.36	0.53	0.26	0.26	
55	0.66	0.63	0.00	0.00	
60+	0.00	0.00	0.00	0.00	



## SUMMARY OF MEMBER DATA INCLUDED IN VALUATIONS

	Non-Uniformed				
	Civilian Patro Employees	ol MoDOT Employees	Non-Uniforn Total	ned Uniforme Patrol	d Total
Participants					
Active Members					
Closed Plan	805	5,035	5,840	890	6,730
Year 2000 Plan	297	1,824	2,121	151	2,272
Total Active Members	1,102	6,859	7,961	$\overline{1,041}$	9,002
Retiree - Regular Pensioners					
Closed Plan	390	3,987	4,377	707	5,084
Year 2000 Plan	194	1,299	1,493	1	1,494
Total Regular Pensioners	584	5,286	5,870	708	6,578
Disability Pensioners	12	136	148	5	153
Terminated Vested Member	rs 176	976	1,152	133	1,285
Total	1,874	13,257	15,131	1,887	17,018
Active Member					
Valuation Payroll \$3	4,175,162	\$247,864,082	\$282,039,244	\$ 46,171,643	\$ 328,210,887
Unfunded Actuarial					
Accrued Liability	N/A	N/A	\$909,585,537	\$251,745,232	\$1,161,330,769

## ACTIVE MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE

For the Year Ended June 30, 2004

### Department of Transportation and MPERS

	Co	unted by (	Complete Y	Years of Se	ervice to V	aluation	Date		Totals
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	7							7	\$ 94,643
20-24	293	9						302	9,763,332
25-29	447	143	3					593	19,438,652
30-34	376	304	140	4				824	28,400,485
35-39	331	215	289	113	10			958	33,459,368
40-44	320	230	214	303	165	27		1,259	46,522,452
45-49	204	179	182	234	171	267	14	1,251	46,860,024
50-54	153	117	132	153	105	185	93	938	35,268,933
55-59	78	62	80	87	45	56	88	496	19,198,127
60-64	38	27	25	41	15	14	33	193	7,388,830
65-69	6	3	7	8		4	4	32	1,234,561
70 +	1	2	1		1	1		6	234,675
Totals	2,254	1,291	1,073	943	512	554	232	6,859	\$ 247,864,082

Average Age: 42.0 years Average Service: 11.4 years Average Pay: \$36,137



## ACTIVE MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE

For the Year Ended June 30, 2004

### Civilian Patrol

	Cour	nted by C	Complete Y	ears of Se	ervice to	Valuation	Date		Totals
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	3							3	\$ 35,622
20-24	41							41	944,280
25-29	66	23	1					90	2,323,198
30-34	51	48	11	1				111	3,187,603
35-39	42	48	30	14	3			137	4,072,567
40-44	51	38	30	38	27	2		186	5,814,980
45-49	24	30	23	33	39	35	2	186	6,375,119
50-54	36	24	14	26	28	35	25	188	6,625,695
55-59	20	21	17	19	18	9	12	116	3,588,475
60-64	8	7	11	8	2	1	1	38	1,034,321
65-69	1			2			1	4	112,656
70+				1			1	2	60,646
Totals	343	239	137	142	117	82	42	1,102	\$ 34,175,162

Average Age: 43.3 years Average Service: 11.8 years Average Pay: \$31,012

## ACTIVE MEMBERS BY ATTAINED AGE AND YEARS OF SERVICE

### For the Year Ended June 30, 2004

### Uniformed Patrol

	Cou	nted by (	Complete '	Years of S	ervice to	Valuation	Date		Totals
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20									\$ 0
20-24	25							25	848,027
25-29	93	32						125	4,420,279
30-34	50	163	28					241	9,213,629
35-39	13	102	124	9				248	10,233,375
40-44	4	25	43	61	20			153	7,113,691
45-49	2	4	9	33	46	32		126	6,664,930
50-54				2	17	53	27	99	6,105,388
55-59					3	3	18	24	1,572,324
60+									0
Totals	187	326	204	105	86	88	45	1,041	\$ 46,171,643

Average Age: Average Service: Average Pay: 38.2 years

12.9 years

\$44,353



## SCHEDULE OF ACTIVE MEMBER VALUATION DATA

Actuarial Valuation Date	Number	Covered Payroll	Average Pay	% Change in Average Pay from Prior Year
06/30/1995	8,904	\$ 250,529,253	\$ 28,137	2.5%
06/30/1996	9,023	264,196,115	29,280	4.1
06/30/1997	8,997	280,209,116	31,145	6.4
06/30/1998	8,871	284,889,796	32,115	3.1
06/30/1999	9,140	298,673,247	32,678	1.8
06/30/2000	9,171	312,532,009	34,078	4.3
06/30/2001	9,087	327,049,257	35,991	5.6
06/30/2002	8,695	312,747,492	35,969	(0.1)
06/30/2003	8,895	318,744,193	35,846	(0.3)
06/30/2004	9,002	328,210,887	36,460	1.7
		Te	n Year Average	2.9%

### SOLVENCY TEST

Valuation Date	(1) Retirees and	(2) Active and Inactive Members (Employer	Present Valuation	Valu	ion of Pre es Covere resent Asse	d by
June 30	Beneficiaries	Financed Portion)	Assets	(1)	(2)	Total
		\$ Millions				
1999	1,132	921	1,243	100%	61%	61%
2000	1,238	951	1,423	100%	65%	65%
2001	1,375	926	1,521	100%	66%	66%
2002*	1,470	888	1,451	99%	62%	62%
2003	1,555	863	1,364	88%	56%	56%
2004	1,626	867	1,332	82%	53%	53%

<sup>\*</sup> New Assumptions adopted.

### DERIVATION OF EXPERIENCE GAIN (LOSS)

Actuarial experience will never coincide exactly with assumed experience (except by coincidence). Gains and losses may offset each other over a period of years, but sizeable year-to-year variations from assumed experience are common. Detail on the derivation of the experience gain (loss) is shown below.

	\$ Millions
UAAL Beginning of Year (at July 1)	\$ 1,054.2
Normal Cost	38.7
Contributions	(87.6)
Disbursements	0.0
Interest	84.9
Expected UAAL Before Any Changes	1,090.2
Effect of Changes in Assumptions and Methods	0.0
Expected UAAL After Changes	1,090.2
End of Year UAAL (at June 30)	1,161.3
Gain/(Loss) for Year	\$ (71.2)
Gain/(Loss) as a percent of actuarial accrued liabilities	
at start of year (\$2,418.1 million)	(2.9)%

Valuation Date June 30	Experience Gain (Loss) as % of Beginning Accrued Liability				
1999	(7.7)%				
2000	(0.1)%				
2001	(9.3)%				
2002	(4.5)%				
2003	(5.2)%				
2004	(2.9)%				



### SUMMARY OF PLAN PROVISIONS\*

As of June 30, 2004

### Comparison of the Closed Plan and the Year 2000 Plan

Membership Eligibility	Members who work in a position normally requiring at least 1,000 hours of work a year.	Members hired for the first time on or after July 1, 2000, in a position requiring at least 1,000 hours of work a year.
		Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.
Normal Retirement Eligibility	Age 65 & active with 4 years of service. Age 65 with 5 years of service. Age 60 with 15 years of service. "Rule of 80"/minimum age 48. Age 55 with 4 years of service. (uniformed members only)	Age 62 with 5 years of service.  "Rule of 80"/minimum age 48.  Age 60 (mandatory with 5 years of serviceuniformed members only).
Early Retirement Eligibility	Age 55 with 10 years of creditable service.	Age 57 with 5 years creditable service.
Benefit Life Benefit	1.6% x FAP** x service (Base benefit is increased by 33 1/3% for uniformed patrol members only.)	1.7% x FAP** x service
Temporary Benefit	Not available.	0.8% x FAP** x service (until age 62 - only if retiring under "Rule of 80"),
Vesting	5 years of service.	5 years of service.
COLA (Cost-of-Living Adjustment)	If hired before August 28, 1997, annual COLA is a minimum of 4%, maximum 5%, based on 80% of the increase in the CPI-U over the previous year, up to a maximum of 65% of original benefit. After 65% cap is reached, annual COLA increases will be equal to 80% of the change in the CPI-U, with a maximum of 5%. If hired after the above date, annual COLAs will be equal to 80% of the increase in the CPI-U, maximum 5%, with no guaranteed minimum.	Annual COLA is equal to 80% of the change in the CPI-U with a maximum rate of 5%.
Survivor Benefit (Death before retirement) Non duty-related Death	Survivor benefit to eligible spouse calculated using the Joint and 100% survivor option or 80% of the member's life income annuity paid to eligible children.  If at least 3, but less than 5, years of service the survivor benefit is calculated using 25% of the member's base benefit calculated as if the member retired on their date of death.	Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children.
Duty-related Death	Survivor benefit to eligible spouse or children no less than 50% of final average pay (no service requirement).	Survivor benefit to eligible spouse or children no less than 50% of final average pay (no service requirement).
Optional Forms of Payment (Death after retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Unreduced Joint & 50% Survivor - Joint & 100% Survivor - 60 or 120 Guaranteed Payments - BackDROP	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments - BackDROP
Disability	Long-Term Disability and Work-Related Disability	Long-Term Disability and Work-Related Disability

This summary describes the plan provisions of the Revised Statutes of Missouri (RSMo.), as amended, that governed the programs, which MPERS administered during the period covered by this report. It does not overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply. The Year 2000 Plan is effective July 1, 2000. Final Average Pay - highest 36 consecutive months of pay.

### LEGISLATIVE CHANGES

On June 10, 2003, Governor Bob Holden signed into law Senate Bill 248 which contained a provision that affected our retirement system for the months of July 2003 to January 2004.

#### Retirement Incentive

Active employees who first qualified for normal retirement between October 1, 2003 and January 1, 2004, were considered eligible for normal retirement during the incentive period (with no adjustment for retiring early). These members were considered to have satisfied the eligibility requirement for normal retirement. The calculation of the retirement benefit is based only on the actual service credit at the date of retirement. Active employees who meet the eligibility requirements for the BackDROP between October 1, 2003, and January 1, 2004, are able to retire during the incentive period and qualify for the BackDROP amount accrued up to the date of actual retirement.

A provision in the bill allowed a number of governing boards to elect to provide a medical incentive to employees. This medical incentive provided a member who retired during the incentive period to have his/her medical insurance premium stay at the active employee rate instead of the retiree rate for 5 years or until age 65, whichever occurs first.

#### Retirement System — Name Change

Another noteworthy change during the 2004 Legislative Session was HB 1440. This bill changed the official name of the retirement system from Highway and Transportation Employees' and Highway Patrol Retirement System to the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS).

#### Administrative Changes

House Bill 1440 also contained provisions that involve minor modifications and clarifications to both the Closed Plan and the Year 2000 Plan. These changes will enable MPERS to more effectively administer the benefit provisions of the retirement system.



# Statistical Section

### In This Section

Active Member Data

Terminated Vested Member Data

Schedule of Retired Members by Type of Benefit

Schedule of Average Monthly Benefit Payments

Retired Members Data (Ten-Year Averages)

Additions By Source

Deductions By Type

Benefit Payments By Type

Benefit Recipients

Membership Distribution

### ACTIVE MEMBER DATA

### BY AGE

Age	Total	Department of Transportation	Civilian Patrol	Uniformed Patrol	Retirement System
< 21	66	58	8	-	12-
21-25	531	414	62	54	1
26-30	909	660	94	154	1
31-35	1,264	874	116	272	1 2
36-40	1,393	1,027	159	205	2
41-45	1,650	1,319	183	148	-
46-50	1,475	1,159	191	122	3
51-55	1,050	792	179	79	-
56-60	509	413	87	7	2
61-65	133	115	18	-	-
>65	22	17	5	-	2
Total	9,002	6,848	1,102	1,041	11
Average Age		41	43	38	41

### BY YEARS OF SERVICE

Years of Service	Total	Department of Transportation	Civilian Patrol	Uniformed Patrol	Retirement System
< 1	980	864	94	22	0
1-5	2,207	1,725	292	187	3
6-10	1,798	1,221	225	350	2
11-15	1,277	978	139	160	0
16-20	1,217	953	140	122	2
21-25	664	482	99	82	1
26-30	623	456	76	89	2
31-35	175	118	31	26	
36-40	52	42	6	3	1
41-45	8	8		-	-
46 +	1	1	-	-	-
Total	9,002	6,848	1,102	1,041	11
ge Service		11	11	13	16

### TERMINATED VESTED MEMBER DATA

### BY AGE

Age	Total	Department of Transportation	Civilian Patrol	Uniformed Patrol
< 21	-		-	-
21-25	-	-	-	-
26-30	37	28	8	1
31-35	180	109	22	49
36-40	258	198	28	32
41-45	291	236	38	17
46-50	241	193	32	16
51-55	192	144	31	17
56-60	81	63	17	1
61-65	5	5	-	-
>65	~	-	-	-
Total	1,285	976	176	133
Average Age		44	44	40

### BY YEARS OF SERVICE

	Years of Service	Total	Department of Transportation	Civilian Patrol	Uniformed Patrol
	< 1	4	-		-
	1-5	224	164	33	27
	6-10	601	460	74	67
	11-15	298	227	45	26
	16-20	116	91	17	8
	21-25	39	29	7	3
	26-30	7	5	-	2
	31-35		*	-	-
	Total	1,285	976	176	133
Average	Service		10	10	9

## SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT

#### ALL MEMBERS

Type of Benefit

		Type of	LICITOTIC			
Amount of	Retires	nent	Dis	ability		Total
Monthly Benefit	Normal	Early	Normal	Long-Term	Survivor	Recipients
1-200	22	14	6	3	269	314
201-400	85	76	9	23	371	564
401-600	147	64	8	23	283	525
601-800	221	39	11	11	181	463
801-1000	227	16	6	6	132	387
1001-1200	269	7	7	4	100	387
1201-1400	291	9	9	1	68	378
1401-1600	334	5	9	2	52	402
1601-1800	316	4	3	14	53	376
1801-2000	323	1	3	1	42	370
2001-2200	299	2	3	· ·	33	337
2201-2400	314		1	-	37	352
2401-2600	257	1	1	-	19	278
2601-2800	199	-	1	-	21	221
2801-3000	203	-		1	25	229
>3000	1,098	-	1	-	49	1,148
TOTALS	4,605	238	78	75	1,735	6,731*

### MISSOURI DEPARTMENT OF TRANSPORTATION

Type of Benefit

Amount of	Retires		Di	Disability		Total
Monthly Benefit	Normal	Early	Normal	Long-Term	Survivor	Recipients
1-200	18	9	6	1	250	284
201-400	61	61	9	23	346	500
401-600	115	58	8	18	258	457
601-800	192	35	11	11	157	406
801-1000	195	14	6	6	109	330
1001-1200	238	5	6	3	80	332
1201-1400	263	8	9	1	48	329
1401-1600	293	5	7	2	42	349
1601-1800	266	4	2	-	40	312
1801-2000	273	1	2	1	24	301
2001-2200	254	2	3	-	24	283
2201-2400	277	-	1		27	305
2401-2600	222	1	-	2	14	237
2601-2800	174	3-	*	-	16	190
2801-3000	175	9=	×.	-	22	197
>3000	576		-	-	34	610
TOTALS	3,592	203	70	66	1,491	5,422

<sup>\*</sup> This number includes two retirement system staff retirees.

## SCHEDULE OF RETIRED MEMBERS BY TYPE OF BENEFIT

### CIVILIAN PATROL

Type of Benefit

		Denem			
Retires		Dis	sability		Total
Normal	Early	Normal	Long-Term	Survivor	Recipients
3	5	8	2	17	27
20	15	-	-	15	50
24	6	-	5	16	51
26	4	-	π.	7	37
29	2		_	11	42
28	2	1	1	15	47
26	1	-	-	8	35
37	~	1	2	1	39
46	-	1	-	2	49
47	-	-	-	2	49
. 42	-	-	=	1	43
32	-	-	-	1	33
19	-	420	#		19
12	-	-	-		12
7		-	1	1	9
50	-	_	-	2	52
448	35	3	9	99	594
	Normal  3 20 24 26 29 28 26 37 46 47 42 32 19 12 7 50	Retirement         Normal         Early           3         5           20         15           24         6           26         4           29         2           28         2           26         1           37         -           46         -           47         -           42         -           32         -           19         -           12         -           7         -           50         -	Retirement         District           Normal         Early         Normal           3         5         -           20         15         -           24         6         -           26         4         -           29         2         -           28         2         1           26         1         -           37         -         1           46         -         1           47         -         -           42         -         -           32         -         -           19         -         -           12         -         -           7         -         -           50         -         -	Retirement         Disability           Normal         Early         Normal         Long-Term           3         5         -         2           20         15         -         -           24         6         -         5           26         4         -         -           29         2         -         -           28         2         1         1           26         1         -         -           37         -         1         -           46         -         1         -           47         -         -         -           32         -         -         -           32         -         -         -           19         -         -         -           12         -         -         1           7         -         -         1           50         -         -         1	Retirement         Disability         Normal         Long-Term         Survivor           3         5         -         2         17           20         15         -         -         15           24         6         -         5         16           26         4         -         -         7           29         2         -         -         11           28         2         1         1         15           26         1         -         -         8           37         -         1         -         1           46         -         1         -         2           47         -         -         2           47         -         -         2           42         -         -         1           32         -         -         -           19         -         -         -           12         -         -         -           7         -         -         1         1           50         -         -         -         2

### UNIFORMED PATROL

Type of Benefit

			or benefit			
Amount of	Retires		Dis	ability		Total
Monthly Benefit	Normal	Early	Normal	Long-Term	Survivor	Recipients
1-200		-	-	-	2	2
201-400	4	-	2	-	10	14
401-600	8	-	-	= :	9	17
601-800	3		-	-	17	20
801-1000	3	-	2	20	12	15
1001-1200	3	-	-	-	5	8
1201-1400	2	-	-	-	12	14
1401-1600	4	-	1	-	9	14
1601-1800	4	-	-	-	11	15
1801-2000	3		1	-	16	20
2001-2200	3	-	-	-	8	11
2201-2400	5	-	12	_	9	14
2401-2600	15	-	1	-	5	21
2601-2800	13	-	1	-	5	19
2801-3000	21	-	-	-	2	23
>3000	472	-	1	-	13	486
TOTALS	563	-	5	-	145	713

## SCHEDULE OF AVERAGE MONTHLY BENEFIT PAYMENTS

### BY YEARS OF SERVICE

scal Year			0-10	11-15	16-20	21-25	26-30	31-35	36-40	41+
		M	ISSOUR	I DEPAR	TMENT	OF TRA	NSPORTA	TION		
2000	Average 1		237	478 10	820 14	1,009 17	1,922 53	2,557 70	2,872 57	3,195
2001	Average I		251 22	428 25	629 29	1,262 35	1,927 79	2,658 155	2,984 66	3,256
2002	Average 1		348	517 16	620 14	1,270 33	2,117 58	2,640 65	2,919 32	2,604
2003	Average 1		321 13	425 11	619 12	1,168 23	2,031 48	2,520 41	2,755 31	2,892
2004	Average Current		304 10	536 14	833 19	1,341 22	1,953 71	* 2,684 60	2,561 29	3,316
				С	IVILIAN	PATROL				
2000	Average Current		267 2	549 1	674 3	1,101	1,757	2,479 9	2,939	2,132
2001	Average Current		254 5	529 1	728 1	1,302 4	1,930 14	2,458 23	2,892 10	3,110
2002	Average Current		172 2	285 5	839 1	1,133 5	1,935 7	2,425	2,299	(
2003	Average Current		332 3	377 4	566 3	1,327 3	1,942 10	1,998 15	2,513 3	1,762
2004	Average Current		231 3	<b>406</b> 5	482 2	1,223 4	1,822 10	2,337 8	<b>2,808</b> 7	4,802
				UNI	FORMEI	PATRO	L			
2000	Average Current		0	618	0	1,811	3,692	4,018 15	4,453 8	(
2001	Average Current		0	486	0 0	1,342	2,979	3,956 11	4,550	5,03
2002	Average Current		0 0	<b>621</b> 1	1,480 1	2,840	3,350	3,956 12	4,325	5,60
2003	Average Current		325	441	0	0	3,006 12	3,788 7	3,902 8	(
2004	Average Current		503	350 1	1,275	0	2,816	3,442	3,820	4,250

### RETIRED MEMBERS DATA (TEN-YEAR AVERAGES)

### RETIREMENT AGE / YEARS OF SERVICE / BENEFIT INFORMATION

(The information contained in this tabulation relates to current retirees who retired in the years indicated)

Retired in Fiscal Year	Current Retirees	Average Age at Retirement	Average Service	Average Initial Benefit	Average Benefit on June 30, 2004	Percent of Increase
	MIS	SOURI DEPART	MENT OF	TRANSPORTA		3474
1995	234	58.44	31.80	\$1,278.95	\$1,946.72	52.21%
1996	180	59.09	32.37	1,447.50	2,057.31	42.13
1997	181	58.52	30.69	1,350.30	1,875.89	38.92
1998	198	59.55	31.83	1,433.76	1,906.58	32.98
1999	178	58.66	31.33	1,514.43	2,029.09	33.98
2000	263	58.07	31.98	1,695.47	2,305.25	35.96
2001	437	56.58	32.52	2,000.55	2,115.55	5.75
2002	239	58.19	31.27	2,059.03	2,088.06	1.41
2003	195	57.57	30.43	1,852.46	1,926.38	3.99
2004	234	57.38	28.60	1,928.62	1,964.49	1.86
		CIV	ILIAN PATR			
1995	29	59.10	27.03	\$ 960.01	\$1,481.27	54.30%
1996	25	60.96	26.28	953.58	1,390.97	45.87
1997	28	60.18	28.75	1,171.38	1,618.72	38.19
1998	26	59.46	28.54	1,273.80	1,706.92	34.00
1999	27	58.63	30.04	1,357.57	1,902.20	40.12
2000	34	58.82	28.94	1,373.79	1,863.51	
2001	60	58.13	31.07	1,986.48		35.65
2002	30	57.73	26.97	1,486.73	2,107.30	6.08
2003	45	58.47	29.31		1,514.70	1.88
2004	40	58.35	27.25	1,560.91 1,746.80	1,603.51 1,748.94	2.73
2004	40		ORMED PAT		1,/40.94	0.12
	-					
1995	67	54.12	32.28	\$2,455.50	\$3,778.96	53.90%
1996	22	54.36	32.32	2,649.40	3,692.18	39.36
1997	33	54.73	31.82	2,779.44	3,737.68	34.48
1998	29	53.93	31.10	2,915.93	3,796.43	30.20
1999	48	54.46	31.73	3,082.83	3,836.99	24.46
2000	28	54.71	33.07	3,203.21	3,839.80	19.87
2001	28	57.00	33.54	2,792.51	3,332.80	19.35
2002	35	52.97	32.46	3,255.96	3,754.94	15.33
2003	30	54.33	32.07	2,814.98	3,162.73	12.35
2004	27	54.93	31.70	2,674.71	3,066.60	14.65
		RETIR	EMENT SYS	STEM		
1999	1	69.00	14.00	\$ 79.97	\$ 97.30	21.67%
2003	1	51.00	30.00	2,402.04	2,445.83	1.82

NOTE: Annual cost-of-living adjustments for the Closed Plan range between 4% and 5%. Annual cost-of-living adjustments for the Year 2000 Plan are 80% of the CPI-U.

### ADDITIONS BY SOURCE

Fiscal Year	Employer Contributions	Other Contributions	Investment Income	Net Other Income	Total
1999	\$ 69,569,654	\$ *	\$ 149,470,276	\$ 0	\$ 219,039,930
2000	70,191,993	*	52,025,236	0	122,217,229
2001	81,155,196	197,823	(32,956,576)	0	48,396,443
2002	77,440,468	640,254	(88,252,400)	0	(10,171,678)
2003	76,806,313	2,584,257	36,526,003	0	115,916,573
2004	86,724,914	842,665	180,910,906	33,851	268,512,330

### DEDUCTIONS BY TYPE

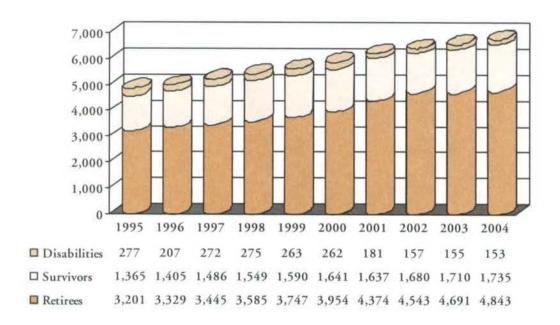
Fiscal Year	Benefit Payments	Administrative Expenses	Total
1999	\$ 86,255,201	\$ 679,362	\$ 86,934,563
2000	95,402,854	665,941	96,068,795
2001	111,985,064	835,215	112,820,279
2002	133,498,818	1,334,555	134,833,373
2003	144,334,345	1,451,855	145,786,200
2004	154,987,027	1,639,133	156,626,160

### BENEFIT PAYMENTS BY TYPE

Fiscal Year	Regular	Disability	Death	Total
1999	\$ 85,481,941	\$ 553,260	\$ 220,000	\$ 86,255,201
2000	94,593,110	519,745	290,000	95,402,854
2001	111,189,632	490,433	305,000	111,985,064
2002	132,558,139	515,679	425,000	133,498,818
2003	143,386,832	537,513	410,000	144,334,345
2004	153,085,937	1,491,089 *	410,000	154,987,027

<sup>\*</sup> Prior to FY04, work-related and normal disabilities were reported in Regular Benefits.

### BENEFIT RECIPIENTS



### MEMBERSHIP DISTRIBUTION

